The Builder.

VOL. XXXIV. No. 1737. SATURDAY, MAY 20, 1876.

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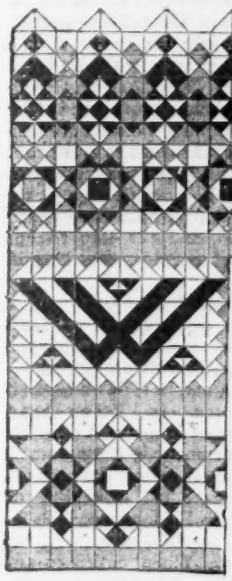
St. James's Square.



"EASTWARD, HO!" has always been the cry of stay-at-home society as well as of restless travellers. Early in the seventeenth century fashionable people left the City for Great Queen-street and Covent Garden, and after the Restoration they extended their flight to St. James's. Of late years they have gone still further west, and judges who in the early part of the present century were contented to live in Bedford and Russell squares now congregate in South Kensington. In spite, however, of this continued westward movement St. James's-square still remains the most aristocratic square in London. It may be objected that clubs, banks, and insurance offices have obtained a footing there, and that we have forgotten Grosvenor and the Belgravian squares, but we adhere to our assertion that no other square can boast of having as residents members of every grade in the peerage. In St. James's-square there are now living three dukes, one marquis, two earls, one countess, one viscount, one bishop, one baron, and if this is not sufficient to prove our point, we can throw in a baronet and a general to complete the list.

We have the authority of the Prime Minister for saying that "St. James's-square may be looked upon as our Faubourg St. Germain, and a great patrician residing there dwells in the heart of that free and noble life of which he ought to be a part"; and Dr. Johnson considered that the doggerel written by a porter of the Duke of Leeds contained an enumeration of all the advantages that wealth can give,—

> "She shall have all that's fine and fair,
> And the best of silk and satin shall wear;
> And ride in a coach to take the air,
> And have a house in St. James's-square."

The site of the square was originally a portion of St. James's Fields, upon the southern edge of which the game of pall-mall had been formerly played. Even in the year 1662 the place was not much frequented, and in August Henry Jermyn chose it as the scene of a duel to take place at eleven o'clock in the morning. In 1663, however, according to the French traveller Monconys, the Earl of St. Alban's, to whom the land belonged, proposed to commence building, and among the State Papers is a warrant dated September 23, 1664, "for a grant to Baptist May and Abraham Cowley, on nomination of the Earl of St. Alban's, of several parcels of ground in Pall-mall, described, on rental of 80*l.* for building thereon a square of thirteen or fourteen houses; also of the common highway lying between the houses in South Pall-mall-street and St. James's Park-wall on rental of 40*l.*, with proviso of erecting no building thereon that should cause annoyance to the inhabitants. The said grant is made because persons were unwilling to build such great houses on any terms save that of inheritance, and the former leases were only for years!" In spite of these preparations the square was not habitable until 1676, and among the *Additional MSS.* in the British Museum are copies of several assignments of pieces of ground dated 1675. One is to Nicholas Barbon, Doctor of Physick, and another to the Earl of Kent, and in these indentures the square is referred to as "the intended piazza." This use of the Italian word in its correct meaning is curious, as the arcades at the Piazza in Covent-garden gave rise to the popular notion that a piazza must needs be an arcade, and the arcades of the old Royal Exchange were, in consequence, called the Piazzas. In the Rent Roll of the Earl of St. Alban's (1676) the square is invariably described as the Piazza; but this name did not last long. Although the square was inhabited from the first by many of the most distinguished families in the kingdom, the centre was allowed to remain in a most disgraceful state until 1726, when an Act of Parliament was passed in order to allow the inhabitants to enclose it with railings. Macaulay vividly describes the appearance of this dunghill and dustheap of the parish in his celebrated chapter on the state of London at the period of the Revolution. "St. James's-square was a receptacle for all the offal and cinders, for all the dead cats and dead dogs of Westminster. At one time a cudgel-player kept the ring there. At another time an impudent squatter settled himself there, and built a shed for rubbish under the windows of the gilded saloons, in which the first magnates of the realm, Norfolks, Ormonds, Kents, and Pembrokes gave banquets and balls. It was not till these nuisances had lasted through a whole generation, and till much had been written about them, that the inhabitants applied to Parliament for permission to put up rails and plant trees." There is a curious history connected with the statue of William III., that now stands in the middle of the square, which is worth a passing notice here. In 1724, one Samuel Travers left a sum of money to be spent on the erection of a statue, and when the adornment of the centre of the square was completed in 1727 a pedestal of 15 ft. square intended for such statue arose out of the water. But time went on and the statue being forgotten, a small fountain was made to issue from the pedestal. Travers's overlooked bequest was in course of time found in the list of unclaimed dividends, and the representation of the third William was cast in brass and set up in 1808; the horse being modelled by Bacon from a favourite animal belonging to the third George.

Mr. Peter Cunningham obtained the following list of the inhabitants of the square in 1676 from the Rate-books of the parish of St. Martin's-in-the-Fields:—"Marquis of Blandford, Lady Newburgh, Countess of Warwick, Earl of Oxford, Earl of Clarendon, Sir Cyrill Wich, Lawrence Hyde, Sir Ffoulk Lucy, Lady Purbeck, Sir Allen Apsley, Madam Churchill, Madam Davis."

The so-called Marquis of Blandford was the nephew of the great Turenne, and his real name was Lewis de Duras, Marquis of Blanquefort; he was naturalised in England, created Baron Duras, of Holdenby, and afterwards succeeded his father-in-law as Earl of Feversham. Dryden praises him under the name of "Helon" in "Absalom and Achitophel," but Swift calls him "a very dull old fellow."

The Earl of Clarendon was the eldest son of the great Lord Chancellor, and Lawrence Hyde, who was afterwards created Earl of Rochester, was the second son of the same. Sir Cyril Wyche was the second son of Sir Peter Wyche, English ambassador at Constantinople, in which city he was born. He was President of the Royal Society in 1683, and married the niece of John Evelyn.

The Earl of Oxford was Aubrey de Vere, the twentieth and last earl of that family, after whom the Horse Guards were called the "Oxford Blues." His only claim to notice is his rascally conduct towards an actress, known by her stage name of Roxalana, whom he deceived by a false marriage. He went to Mrs. Davenport's lodgings with a trumpeter and kettle-drummer, intended to represent a clergyman and a trustworthy witness, and the lady did not find out their true characters until some time afterwards.

The two ladies at the end of the list were the respective mistresses of the king and the Duke of York. Madam Davis, better known as Moll Davis, the actress and dancer, captivated the king at the Duke's playhouse, and charmed Pepys so much that he set down in his Diary that she danced "beyond everything in the world." Arabella Churchill was sister of the Duke of Marlborough and mother of the Duke of Berwick. She afterwards married Colonel Charles Godfrey. A few years later another mistress of the Duke of York and another mistress of Charles II. were living in the square. In January, 1685-6, when Catherine Sedley was created Countess of Dorchester, and sent from court, a handsome house was furnished for her here and a seat taken for her in the newly-consecrated Church of St. Ann, Soho. Nell Gwyn lived in St. James's-square before she moved to a house on the south side of Pall Mall. Her house was taken down when the Army and Navy Club was built, and her looking-glass is preserved in the visitors' dining-room.

Cunningham's list of the inhabitants in 1677 differs slightly from that of 1676. The new names are those of Sir John Benet; Mr. Shaw; Mr. Bearbone; John Aunger; the French Ambassador; Mr. John Hervey; Earl of St. Alban's

and Earl of Essex. We have already mentioned Dr. Nicholas Barbone as the purchaser of a house in the square. He was a great projector, and published a treatise in 1696 on the expediency of coining the new money lighter, in answer to Locke. He was at one time the possessor of Osterley Park, in Middlesex. The French Ambassador was Antoine Courtin, who shares with the better known Barillon the discredit of having bribed the English statesmen. In 1677 Courtin wrote to the French court, urging that money should be sent to him to distribute among the members of Parliament, because Spain and the emperor had sent money to bribe on the other side.

The Earl of St. Alban's, to whom the land belonged, lived in a large house in the fields, which was made to form a part of the new square. This house had an entrance also from the Haymarket, and was sometimes described as being situated in that street. Its name was retained in that of St. Alban's-street, one of a nest of small streets which were cleared away to make room for the building of Waterloo-place and Regent-street. The hereditary Prince of Tuscany, afterwards Cosmo III., whose travels in England are so often referred to in Macaulay's History of England, was lent this house in 1669. On the evening of May 31, Charles II. and his brother, the Duke of York, were entertained at supper by the Prince, who, before leaving the country, exhibited some fireworks in St. James's Fields, and distributed among the crowds who flocked to the place several casks of Italian wine and beer. Another exhibition of fireworks which attracted a large crowd of people took place in St. James's-square, in November, 1695, before the Earl of Romney's house. On this occasion William III. supped with the Earl in order to be able to see the great sight, and his guards encompassed the square. Two years afterwards some more fireworks were shown before the king in commemoration of the peace. These fireworks were designed by Sir Martin Beckman, and consisted of "1,000 sky-rockets, from 4 lb. to 6 lb. weight, 200 balloons, 2,400 pumps, with stars, 1,000 cones, 7,000 reports, 15,000 swarms, 400 light balls, 22 rocket-chests, each containing 60 rockets, from one to four pounders." In the old newspaper, the *Postman*, for August 28 to 31, 1703, the following advertisement appeared: "There was one of the trees growing in St. James's-square, over against the Right Hon. the Earl of Romney's house, cut down and carryed away on Saturday night last: whosoever shall give notice to his lordship's porter of the person or persons that did the same, so as he or they may be apprehended, shall have two guineas reward." In the same year (1697) that the Earl of Romney exhibited his fireworks, the Dutch Ambassador made a bonfire of 140 pitch-barrels before his house, and opened two hogsheads of wine, which were kept continually running among the common people. This was on the thanksgiving-day appointed by the States-General for the peace.

In Mackay's curious journey through England (1724) there is a later list of inhabitants than those given by Cunningham:—"The late Duke of Ormond had a noble palace, now purchased, and finely adorned, by the Duke of Chandos; the Duke of Roxburgh another; the Duke of Norfolk a third, at present inhabited by the Venetian Ambassador. The Earl of Pembroke, the Earl of Portland's, now the Duke of Norfolk's, who gave 10,000*l.* for it. The Earl of Stafford, the Lord Cornwallis, the Duke of Kent, the Lord Ossulston, the Lord Ashburnham, the Lord Harvey, have each their fine palaces in this square; the Countess of Northampton, Sir John Germain, and Count Bothmar have also theirs; all worthy the curiosity of a stranger, especially the Duke of Kent's gallery and the Earl of Portland's apartments." In 1734 there were living in the square four dukes (Norfolk, Southampton, Kent, and Chandos), eight earls (Pembroke, Essex, Chesterfield, Stafford, Bristol, Bredalbane, Tankerville, and Wilmington), one baron (Lord Bathurst), and a prime minister (Sir Robert Walpole). Among the celebrated persons who have lived in the square and the position of whose houses we cannot identify, we may mention Henry Bennet, Earl of Arlington, the statesman, who afterwards lived in the house which stood on the site of the present Buckingham Palace; the treacherous Earl of Sunderland, the prime minister who was called by Queen Anne "the subtillest workingest villain that is on the face of the earth"; the Earl of Pembroke, president of the Royal Society, who collected "statues, dirty gods, and coins"; George Fitzroy, Duke of Northumberland, a natural son of Charles II. by the Duchess of Cleveland; the Marquis of Halifax, the celebrated Trimmer, praised by Macaulay in the most glowing terms; Charles Sackville, Earl of Dorset, better known as Lord Buckhurst, and the writer of the famous song commencing,—

> "To all you ladies now at land
> We men at sea indite;"

Sir Joseph Williamson, Secretary of State and president of the Royal Society; the Duke of Hamilton, who was killed in a duel with Lord Mohun in the year 1712; the Earl of Macclesfield, president of the Royal Society, and the principal agent in carrying through the House of Lords the Bill for the Reformation of the Calendar, in a house which was built by his father, Lord Chancellor Macclesfield; the great Earl of Chatham; Warren Hastings; and the eminent diplomatist, William Eden, first Lord Auckland.

One of the houses in the square was inhabited for a time by Mrs. Cormack, but her name does not appear in the rate-books of St. James's parish. She gave a masquerade ball, about the time that Coutts, the banker, was married to Miss Mellon, and Sir Elijah Impey, the Indian judge, went to it in the character of Coutts, dressed half in sables as a widower, and half in white as a bridegroom. On this occasion Impey delivered "The Merry Mourner's Address to the Ladies," commencing,—

> "A tender bridegroom, and a widower true,
> I come prepared to whimper or to woo;
> Conflicting passions at eternal strife,
> 'Twixt a new married and new buried wife;"

and ending,—

> "Take then which side you please,—if neither suit
> I've pleased myself, however, *coûte qui coûte*."

As each of the houses has a history, we will now note down a few particulars of them in the order they are numbered.

No. 1, at the corner of Charles-street, which is now occupied as the chief West-end branch of the London and Westminster Bank, was formerly inhabited by the Earl of Dartmouth and by Lord Grantham, who, in 1833, succeeded as Earl De Grey.

No. 2, the family mansion of Viscount Falmouth, was formerly occupied by the brave Admiral Boscawen, the third son of the first Lord Falmouth. He converted some French cannon, which he had captured in the action under Lord Anson, off Cape Finisterre, into street-posts, and these five posts are still to be seen in their old position.

No. 3 was the family mansion of the Duke of Leeds, and the house referred to in the lines quoted at the beginning of this article. Here Mr. Henry G. Bohn found in the year 1850 some manuscripts which he thought threw some light upon the authorship of "Junius's Letters."

No. 4 was the town house of the late Earl De Grey, which contained his fine gallery of pictures. It was here that for several years the Earl gave, as president of the Royal Institute of British Architects, his large and charming *soirées*, which no one who assisted at them will forget. The house is admirably planned for such entertainments.

No. 5 is the mansion of the Earl of Strafford, and an Earl of Strafford lived in it more than a century and a half ago. Among the manuscripts in the British Museum (Add. MS. 22,254) is one which contains a full account of the alterations made in the house in 1712 and 1713. The carpenter's work by one Wellbeloved cost 60*l.* 11*s.* 11½*d.*, and Thomas Combes's bill for plaster-work amounted to 47*l.* 5*s.* 10½*d.* The glazier's bill was 14*l.* 19*s.* 6*d.*, and the bill for painting was 57*l.* 4*s.* 2*d.* In 1748-9 the tradesmen sent the Earl estimates for finishing his house which had been newly-rebuilt. That for masonry amounted to 842*l.*, that for plaster-work to 630*l.*, and the joiner's estimate was 3,430*l.*

No. 6 has belonged to the family of the Marquis of Bristol (its present owner) from the first building of the square, John Hervey having lived in it in 1677. The holders of the two peerages of Bristol and Strafford have been next-door neighbours for many years, and in the MS. referred to above we find an agreement between Lord Hervey and the Earl of Strafford about the party-walls between the two houses. Here lived John Lord Hervey, the "Sporus" of Pope, and the husband of the beautiful Molly Lepell; and here died his son Augustus, the third Earl of Bristol, and the first husband of the notorious Miss Chudleigh, afterwards Duchess of Kingston.

No. 7 was originally joined to the corner house of York-street, the door of which is in that street. This large mansion was at one time occupied by the French Ambassador, then the Earl of Romney had it, and after him it came into the possession of Lord Cornwallis. The next occupant was the Spanish Ambassador, and the Castle of Castile is still to be seen on the chapel in York-street, which was the place of worship attached to the embassy. This chapel was afterwards let to several congregations, and in 1817 the doctrines of Swedenborg were taught in it. It has since been used for the Church of England service, and filled by Mr. Stopford Brooke's fashionable congregation. During the last few months, however, it has been closed, and its minister has moved elsewhere.

No. 7A is on the opposite corner of York-street, and here for several years lived the great Duke of Ormonde, whose name is retained in Ormonde-yard, built on the mews of the house. In 1719 this mansion was sold for 7,500*l.* to the magnificent Duke of Chandos, who built Canons and a portion of the north side of Cavendish-square.

No. 8 was for some years the scene of the brilliant festivities presided over by the Earl and Countess of Blessington. The Earl was living here in 1821, when he was assisting the elder Charles Mathews in obtaining patrons for the proposed monument to Shakspeare at Stratford. He died in May, 1829, and the house was then given up. Dr. Dionysius Lardner, the projector of "Lardner's Cyclopædia," lived in this house in 1834, 1835, and 1836, and the late Earl of Derby, K.G., when Lord Stanley, was here in 1850.

No. 9 was the residence for several years of Alexander Davison, the prize agent to Lord Nelson, after the victory of the Nile; and here the great sailor and Lady Hamilton often met. Davison was an army clothier, and in 1795 he became agent for the barrack-stores. In 1798 he began to manufacture the articles in demand himself, and charge them to Government in the names of his *employés*, false vouchers being drawn out. This practice he continued till a change of administration occurred in 1801, after which he sent in the goods he manufactured without charging his commission. When called to account he made a correction of 15,479*l.*, but this was not considered a sufficient reparation, and he was tried at the Court of Queen's Bench before Lord Ellenborough and a special jury, when he was sentenced to two years' imprisonment for malversation of funds. In spite of these troubles, Davison continued to reside in this house until the year 1818, and he died in Brighton in 1829, aged 79 years. At the beginning of the century he commissioned certain of the chief British artists to paint for him pictures illustrative of historical subjects, with the aim of encouraging the talents of native artists, and bringing them fairly in contrast with those of foreign schools. He placed the matter in the hands of Valentine Green, keeper of the British Institution, and nine pictures illustrating incidents in English history were painted by James Northcote, R.A.; David Wilkie, R.A.; Henry Tresham, R.A.; Robert Smirke, R.A.; John Singleton Copley, R.A. ("Death of the Earl of Chatham," and "Offer of the Crown to Lady Jane Grey"); Arthur William Devis; and Benjamin West, P.R.A. ("Sir Philip Sidney rejecting the Water"). Each picture contained the portrait of the artist. In 1807 Davison printed a "Descriptive Catalogue of the Series of Pictures formed on Subjects selected from the History of England, painted by British Artists for Alexander Davison, Esquire, MDCCCVI., in the Order in which they are arranged at his House in St. James's-square."

Hugh, fourth Duke of Northumberland, succeeded Davison, and Hudson Gurney, the grandson of David Barclay, the banker, and for half a century the head of the great Norwich family of Gurneys, lived in the house from 1824 to his death in 1864.

No. 10. "Ada! sole daughter of my house and heart," the daughter of Lord Byron and wife of Lord King, afterwards Earl of Lovelace, lived in this house in 1836.

No. 11 is famous as the place where the magnificent library of John, third Duke of Roxburgh, was preserved. In the dining-room of the house, Evans, the auctioneer, sold it off in May and July, 1812, during forty-two days. It was at this sale that the first edition of Boccaccio's "Decameron," printed by Valdarfer, at Venice, in 1471, "the most notorious book in existence," was sold for the unprecedented sum of 2,260*l.*, after a spirited contest between Earl

Spencer and the Marquis of Blandford, the latter carrying off the prize. Seven years afterwards, when the book was resold, Lord Spencer bought it for 918*l.* 15*s.*

Lord Chief Justice Ellenborough bought the house for 18,000*l.*, and died in it on the 13th of December, 1818. The celebrated statesman William Windham next occupied it, and the club which is at present in possession is named after him.

No. 12, which is now filled with the 80,000 volumes belonging to that most useful institution, the London Library, was formerly the residence of the brave soldier Sir Jeffrey Amherst, Lord Amherst, commander-in-chief.

No. 13, known as Lichfield House, is remarkable for its handsome stone front, which was suggested by "Athenian" Stuart and designed by Brettingham. Among the Additional MSS. in the British Museum (No. 22,254) is Brettingham's receipt for 400*l.*, dated March 26, 1751, "in full for my trouble, drawings, and attendance in his lordship's [Anson] building business in St. James's-square, and all other demands." In the same place we find that 439*l.* 18*s.* 7*d.* was paid for this house before it was rebuilt for the two years 1748–50, which amount was made up as follows: — Rent, 200*l.*; ground-rent, 26*l.* 10*s.* 4*d.*; repairs, 75*l.* 13*s.* 6*d.*; taxes, 137*l.* 14*s.* 9*d.*

On the 20th of June, 1815, when the house was in the possession of Mr. and Mrs. Boehm, the first public announcement of the victory of Waterloo was made from the balcony by the Prince Regent. Soon afterwards the house was rented by the Duke of Bedford, of the Earl of Lichfield, and the notorious Lichfield House compact between the Whigs and O'Connell was formed here in 1835.

No. 14. Sir Philip Francis, to whom the letters of Junius have been attributed, lived in this house from 1791 till 1818, the year of his death.

No. 15. Lord Chancellor Thurlow lived here in the years 1796–1800. Now Nos. 14 and 15 are occupied by the East India United Service Club.

No. 16, the corner house of King-street, was once the residence of the statesman Lord Castlereagh, Marquis of Londonderry, and from hence his body was conveyed to Westminster Abbey for burial.

No. 17, at the opposite corner of King-street, which is now the family mansion of the Duke of Cleveland, was the residence of Lord Grenville, Pitt's leader of the House of Lords from 1789 to 1794.

No. 19 was the town residence of the Bishops of Winchester, but Bishop Wilberforce was the last to fill it. It is now to be sold in order to assist in the endowment of a new see.

The south side of the square is chiefly occupied by the backs of houses in Pall-mall; but an architectural character has been given to it by the erection of the "New Carlton Club," from the designs of Mr. David Brandon.

No. 21, Norfolk House, has long been the town mansion of the Dukes of Norfolk. When Frederick Prince of Wales was ordered to quit St. James's Palace by the king, he rented this house for a period.

On May 24, 1738, George III. was born in the buildings on the north side of the inner court, as was also Edward Duke of York on March 24, 1739. The present building which fronts the square was erected, in 1742, by Brettingham, and the portico was added in 1842. The old house, which we have already referred to as St. Alban's House, still stands at the back of the inner courtyard.

No. 22 has been the town residence of the Bishops of London since the year 1771, when it was purchased for the see. It was very old and dilapidated, and an Act of Parliament was accordingly passed, in 1819, to enable the Bishop to borrow 10,000*l.* for the purpose of rebuilding it.

No. 23, the town-house of the late and present Earls of Derby, brings us back to Charles-street, on the north side of which we started with No. 1 in our perambulation "all round the square."

We are disposed to think our readers will agree with us that the proposition with which we commenced this article has been proved, viz.,— that more distinguished people have lived, and are living, in this square than in any other part of London of the same extent.

Association of Municipal and Sanitary Engineers and Surveyors. — The annual meeting will be held at the Institution of Civil Engineers, Great George-street, Westminster, on the 6th and 7th of July next.

THE PICTURESQUE.

THE love of Nature in her wilder aspects is of modern growth. The towering cloud-capped mountain, the roaring cataract dashing headlong over precipitous rugged rocks, the dark and mysterious depths of the forest, were sources of dread rather than of pleasure to the traveller of old. The feeling of superstitious awe and of fear for personal safety predominated so strongly as to supersede all softer emotions. The traveller wending his way through the valley was more intent upon the look out for the possible band of robbers who might be lurking behind the next mass of rock than upon the study of effects of light and shade produced by the passing clouds; his great desire was to gain the other side of the unbridged swiftly-flowing stream; the cataract was an obstacle to be overcome, not an object for admiration; the dark recesses of the forest, the haunt of wild beasts, the abode of demons, were places to be avoided even during the sultry heat of noonday.

Thorough enjoyment of a contemplative nature can only be secured under a sense of security. A certain zest may doubtless be obtained by a little danger being added to the experiences of one who has hitherto dwelt in safety; it is to him a novelty, which would cease to be pleasing if prolonged.

Places where there is real danger are rarely visited for the mere pleasure of looking at them; there is generally another object in view, philanthropic or scientific; or it may be the love of adventure; these may all indeed be allied with the love of the picturesque, but are rivals thereto.

In ancient poetry it is the cultivated scene, the fields waving with corn, the vineyards heavy with bunches of purple grapes, the formal garden adorned with statues, vases, and trimmed hedges, that are the objects of the poet's admiration. Nature in subjection to rule, not nature in unbridled freedom, the work of man rather than that of the Creator, the artificial rather than the natural, was what met with the most hearty sympathy. The artificial held so strongly that attempts were even made to reproduce the works of nature; artificial hills, cascades, and caverns were produced in the demesnes of the wealthy, and the ravages of time were imitated in artificial ruins; and these trifles appear to have elicited greater admiration than what they were meant to represent. A marked change has of late taken place in this respect, and upon nothing has it had a greater effect than upon architecture.

The charm of an architectural work does not depend entirely upon itself; it is in a great measure dependent upon its surroundings, and the expression it gives to or acquires from the landscape. The architecture of the Greeks is unsurpassed in elegance and refinement of proportion and detail; but it is one-sided and somewhat monotonous; it wants variety, and although it satisfies the æsthetic sense, it does not fill the heart and enlist the warmer sentiments. It is highly refined,—as near perfection as the work of man can be; but our sympathies are not readily enlisted in favour of absolute perfection; we are apt to look upon it with reserve; to consider it rather cold and forbidding; we have more sympathy with what has some faults which have their counterpart in our own nature.

The element of the picturesque is not a marked characteristic of Greek architecture. A Greek temple perched upon a rock is undoubtedly a picturesque object; but it retains a look of artificiality unless in a state of ruin. It does not seem to belong to the scene, and to be an integral part thereof; but rather as if it had been placed there as an ornament, to be removed at pleasure. It owes its beauty to contrast, not to harmony with the landscape. It is not rooted to the soil, and does not spring from amongst the crevices and irregularities of the rock as does the Mediæval church or castle, which often looks like a product of nature, where the eye finds it difficult to detect where the natural features end and the artificial begin.

It is useless to claim for a building the same direct sympathy which is called forth by a painting or statue in which the human element predominates, where action is represented which awakens the deepest interest, where the element of mystery may charm the imagination, where the acme of a tragic history may be graphically displayed. But we may associate with a building the most pleasing recollections. It may have no particular history of its own, but it may contain charming surprises of unexpected quaintness, it may form an integral part of a lovely scene, it may, indeed, be the object which gives point and character to the landscape, without which we would pass the spot regardless of its other beauties, which have been enhanced in value and brought into combination by this work of man.

The wants of civilised man have become very complicated in these our days, and these our wants must necessarily be met in a variety of ways. Men are not now content to walk along a beaten track, but will take erratic courses, and the architect is not free from the prevailing influences. He takes flight wherever there is an opportunity, and wandering at will, up hill and down dale, now on the highway, then o'er the common, many and varied views are spread out before him; he stumbles upon quiet nooks, where beauty hides herself, which, had he kept in the beaten track, would never have delighted his eyes. There is an elasticity in the closely-cropped turf, a bracing energy in the pure air, a sense of freedom which produces a feeling of elation, which may lead to his doing what,— although it may not be wrong,—may be very undignified. There are still dangers in the way; although there is no fear of robber or demon, he may find himself involved in the intricacies of a morass, or tottering upon the verge of a precipice.

Every scene has its special beauty if not marred by man's work. It is with a feeling of pain nigh to agony that we have revisited what was once a lovely vale, down which meandered a brawling brook bordered by rushes and forget-me-nots, to find planted there a huge factory vomiting forth clouds of smoke, and pouring forth into the once pellucid current a stream of filthy discoloured matter. This is an extreme, though by no means a rare, case; but there are others where the intention has been to carry out an improvement and to produce a pleasing effect, and where the result has been the reverse. One of the chief aims of the modern architect should be to master this problem; if he does so he is, in no mean sense, an artist: he must have the eye of an artist, a fine perception of the fitness of things, a feeling for harmony, and a keen sympathy with nature. If so endowed he not only produces artistic work, but themes for artists.

A landscape-painter cannot give the true spirit of a scene he has never cast eyes upon, nor yet can an architect design a building in harmony with the surroundings of a site he is unacquainted with. His design may itself be good, but if misplaced it will appear ugly; and, on the other hand, a design exhibiting no special powers or beauty, *per se*, may in combination with other objects be a worthy and beautiful item in the composition. In certain circumstances the architect may find it expedient to rely upon the effect of contrast between the leading lines of his building and those of the surrounding objects; in others he may place his reliance upon the harmony between his creation and the scene in which it is placed; and in other and rare instances he may feel called upon to make his work predominate so as to subdue, as it were, to its influence everything around. But this last is a dangerous experiment, only to be undertaken by those strong in resources. The safest course is to strive for harmony of effect, so that in character, sentiment, and colour the building may appear amalgamated with the surroundings rather than form a striking object claiming attention; it may withal be the key to the general expression of the composition, the one object which has made the scene picturesque and a subject for the pencil. Far happier are such results, much more to the credit of the architect in the long run than those produced by brusque self-assertion which thrusts itself into prominence. The most ambitious efforts of man compete in vain with the sublimer products of Nature. St. Peter's itself would appear but as a toy if perched on the Matterhorn. In the presence of such objects man's humbler efforts are the most acceptable; they should appear as the mere trimmings upon the drapery of Nature, the smaller ornaments she uses occasionally. On the other hand, when the natural features of a scene are not upon a gigantic scale, but yet possess a certain ruggedness of character, the architect should give some force and prominence to his work. The Mediæval castle is more in keeping with a rocky site than a circular temple, which again is in complete harmony with a landscape where gentle undulations prevail. Where Nature is least assertive, man may be

most so; in a flat landscape the tall spire which cuts up against the sky may dominate with fine effect over every natural feature; it may arise from amidst a thick mass of foliage, or overtop a long row of poplars, and be the one object which enlivens the prevailing monotony. A tower, again, is more appropriate to a scene composed of hill and dale, and it may be of no great altitude if it possess sufficient bulk.

Picturesqueness is more allied to irregularity than to symmetry; but irregularity is not of necessity an imperfection: it is, on the contrary, a frequent source of the most subtle beauty. A human face, which is perfect in contour, may be less attractive than one in which there is not a graceful line. Although an architect may not be a master of detail, although he may lack the power to stamp his designs with the impress of genius, he may be imbued with true artistic feeling, and produce works which have a charm of their own, and which are a source of delight to the traveller in search of the picturesque.

AN ARCHITECTURAL HOMILY.

"The soil of Attica produced at once the most delicious fruits and the most violent poisons."

THAT we are "heirs to all the ages" is especially true as regards architecture. The works themselves are real estate still existing, although in some instances in a state of dilapidation. They are legacies of which all may be beneficiaries, and many there be who have taken the benefit of the succession in these later times. There is so much to choose from, so greatly improved is the facility for attaining variety, that it is not to be wondered at that unity of aim does not exist amongst the claimants. With this *embarras des richesses* at command, the architect is apt to be spoiled, and become extravagant in his notions and proceedings; he desires to do too much and exhausts his energies, or lavishes his means on one single object. A judicious investment in several useful undertakings is the safest course to follow, keeping in reserve a considerable portion of the power which might otherwise be needlessly expended.

If a Classical building—a Greek temple especially—is examined with anything like perspicacity, it will be seen that the architect has done what he desired to do, and no more. Thought, skill, and taste of the highest order are there, but they are restrained and kept within compass. We feel sure that it would have been an easy matter for the architect to have exceeded the limits he had prescribed for himself, and to have indulged in a luxurious extravagance, but he refrains from doing so; his object is not to excite surprise and wonder, but to satisfy a refined taste engendered by the highest culture. Workmanship of the most exquisite description is produced, not simply for its own sake, but as conducive to the great result. Restrained power is everywhere evident, elaboration nowhere obtrudes itself; nothing is in excess, everything in perfect harmony; the product is the outcome of the highest aspirations of the Pagan world. What has been aimed at has been achieved, and the designer is complacent and contented.

But "Time's noblest offspring is its past." The aspirations of the Classic architect were not warmed by the glow of an all-embracing creed of love and true devotion; his works consequently do not display that freedom of idea and wealth of imagery which characterise the works produced by those animated by the hope of a future and holier existence. The work of the Mediævalist is the outward expression of his most cherished hopes; he looked upon this world but as his temporary abode, a fleeting scene soon to be changed for a more glorious reality. Hence arose a feeling of restlessness and discontent with the already existing "love of change which is grounded on the difference between anticipation and reality." Thus it is that Classic architecture produces the impression of repose, Gothic of unrest; the one seems to cling to the earth, the other to soar heavenwards. They abound in contrasts. The stability of the Greek temple is due to the trabeated style of construction, and simple downward pressure, the expression of repose to the prevailing horozontality of the leading lines. The arch, which is the main element in the construction of the Christian Church, "never sleeps," the leading lines are vertical, the composition rather tends towards irregularity than exactness of symmetry. Every effort is made to encourage the expression of upward aspiration. Multiciplicity and variety rather than simplicity are sought for, not variety of parts in an individual building merely, but variety in the form and detail of each separate building, so that each should have a marked character of its own. The impatient restlessness and vigour were such that no pause in the race was permitted, no time was allowed to ponder over and refine upon what had been done, but ever the aspiration after something better led onwards towards the goal. The languid grace of the Classicist was superseded by a nervous vigour, but this vigour was not wanting in refinement.

The Greek architect concentrated his effects, the Mediævalist dispersed his; the eye rests upon the group in the pediment, it wanders from figure to figure on the Gothic façade. The Greek sculptures are strongly pronounced, they form a prominent element in the composition, they exhibit the acme of grace and freedom of action, fulfilling their mission with easy complacency. The Mediæval saints do not obtrude themselves upon our notice; they are crude, stiff, and conventional, and must be sought for amidst a luxuriance of foliation. In the one case the human element is strongly pronounced, in the other it is subordinated; in the one the foliation is conventionally treated, and is repeated throughout; in the other it is more naturalistic, and is ever varied. The Greek temple is complete, finished at every point; any addition to it would destroy its proportions, and disturb the sense of harmony which pervades it. The Christian church, even when complete as to its several parts, may be altered and added to almost indefinitely without producing a feeling of incongruity. There were no difficult constructive problems to solve in the building of a Greek temple; in this respect the simplicity of the style is remarkable; on the other hand, such difficulties abound in the construction of cathedrals and churches. In plan and section the multiplicity and variety of parts, and the necessities of an arcuated and voluted style, were productive of serious difficulties, difficulties which were not always overcome, and which were sometimes got over in a perfunctory and crude manner.

These two styles of architecture, so strongly contrasted, form the bases upon which future excellence must be reared; they are the styles most worthy of imitation, but not imitation of a servile description; not by copying and reproducing what has been done before, but by doing as the designers would have done had they been placed in the same circumstances as ourselves.

The scope of architectural thought is now wider than heretofore. The number and variety of structures upon which the architect can exercise his talents are greatly increased, and to each of these a distinctive character may be given appropriate to, and in keeping with, the object for which it is designed. "Nothing," it has been said, "is denied to well-directed efforts." Are our efforts well directed? Is there not a great amount of useless labour bestowed upon the attempt to "reanimate dead bones"? Is there not amongst us too great a love of display,—a strutting about in "foreign costumes or plumes borrowed from those who were artists, not only in form but in spirit"? It is the absence of this spirit which is the bane of our art,—the servile, heartless homage paid to precedent which is destructive to originality. The only true art is that which gives expression to the spirit of the times. "It is the genius of the hour which always sets his ineffaceable seal on the work, and gives it an inexpressible charm for the imagination."

As "heirs of all the ages," we should not only enjoy our estate, but do something towards its improvement. We may do so by assiduously cultivating the refined ideas of the Greek, and engrafting upon them the vigorous power of the Mediævalist.

"How is the artist to guard himself from the corruption of his time which on every side assails him? By despising its decisions. Let him look upwards to his dignity and his mission, not downwards to his happiness and his wants. Free alike from the vain activity that longs to impress its traces on the fleeting instant, and from the discontented enthusiasm that measures by the scale of perfection the meagre product of reality, let him leave to common sense, which is here at home, the province of the actual, while he strives from the *union of the possible with the necessary to bring out the ideal*." These last are the words of Schiller, no mere dreamer, but a man of rare energy and originality, who himself put the precept he enunciated into practice.

ALTERATIONS IN CHURCHYARDS.

AT the Consistory Court, before Dr. Tristram, an application has been made to the Bishop of London by the vicar and churchwardens of Isleworth for a faculty to make certain alterations in the churchyard with respect to family vaults and tombstones, in order to provide a new entrance to the church for the convenience of the public. The petition stated that in pursuance of an advertisement in the *Times* on the 2nd of December, a vestry meeting was held, and it was resolved that the proposed alterations should be carried out by a faculty, and the expense was estimated at about 100*l*. The vicar attended before the Chancellor, and gave evidence in support of the application. There were four family vaults to be lowered, and a number of tombstones in an upright position to be placed on the ground. No bodies were to be removed, and the relations of two of the families buried had given their consent. Part of the churchyard was closed for burials, and the other portion would be in about a year. Many of the tombstones were in a dilapidated condition, and the churchwardens would put them in proper order if permitted. The Chancellor, in granting the application for a faculty, limited the time to twelve months for repairs of tombstones. The law as to monuments and tombstones should be known. There was no power to order their removal, as inscriptions thereon were admissible in courts of law, and title to property sometimes depended upon them. The vicar undertook to preserve the inscriptions as far as possible. The tombstones were in a neglected condition. Order accordingly.

ABANDONMENT OF THE SAVOY MINT PROJECT.

AT the meeting of the Metropolitan Board of Works, on the 12th inst., the Works Committee submitted a letter from the Chancellor of the Duchy of Lancaster, proposing a modification of the agreement between the Board and the Duchy of November 20th, 1874, by the construction of an additional new road along the boundary separating the properties of the Board and the Duchy, and recommended that the modification be approved and accepted by the Board, subject to the proposed new road being made of the width of 40 ft., the Board and the Duchy each giving up 20 ft. on either side of their boundaries. Mr. Richardson said the Board had received an official communication from the Government to the effect that they had given up the idea of building a new mint upon the Embankment. The Duchy of Lancaster had proposed that a new road should be made from the Strand to the Embankment, and as it would be a great improvement to the property both of the Board and the Duchy of Lancaster, the committee recommended that the offer should be accepted. The recommendation was agreed to.

NEW WATERWORKS AT BATH.

ON the 10th inst. the Mayor and Corporation celebrated the completion of the new city waterworks. The works were commenced in 1870, and their execution has altogether, with the purchasing of land, and the paying of compensation for loss of springs and water power, cost 100,000*l*. The system adopted has been to collect a large number of springs in the valleys below Marshfield, and conduct the water, by means of mains, a distance of eight miles to the city, where there is pressure sufficient to throw water, in case of fire, as high as the highest houses in the centre of the city, and to force an adequate supply for domestic use nearly up to the highest portions of the city. The springs are not caught at the surface, but have been traced to the spot at which they escape from the oolitic rock. A supply has thus been obtained so constant that only small reservoirs for storage are required. The yield of the new springs, together with that of the old works, furnish an average supply of thirty gallons per head per diem for the 60,000 inhabitants of Bath. The works were carried out by Mr. Alfred Mitchell, city engineer.

Windsor Drainage.—Mr. Harrison, inspector of the Local Government Board, held an inquiry at Windsor, on the 9th inst., with reference to an application of the sanitary authority for a second loan of 10,000*l*. for drainage purposes.

SCULPTURE AT THE ACADEMY.

IT is two or three years since the north-east niche (usually the place of honour) in the octagon hall at the Royal Academy Rooms was occupied by a group of sculpture which, however it might be criticised in regard to purity of style, fairly bore down everything else by its vigour and energy of conception. If, while admiring the wild power of "La Danse," one was tempted to regret that a French artist should thus triumph over the English contributors to the Sculpture Gallery, and that his triumph, too, should be achieved by a work not quite in keeping with the serenity and repose which should characterise the highest efforts of the art, both our patriotic and artistic sympathies are gladdened by finding the same place occupied this year by a work as remarkable for energy and vigour as that of Carpeaux, while it is far greater and more truly sculpturesque in style, and possesses a moral grandeur and suggestiveness of which the brilliant French sculptor's work, it must be admitted, was quite destitute. The group of "Valour and Cowardice" (1,427), to which we have already alluded as part of the late A. Stevens's design for the Wellington monument, has this in common with Carpeaux's work, that both belong to the purely ideal or abstract class of representation to which especially the art of sculpture is suited, and which is so sadly neglected at present, and that both were designed as adjuncts to an architectural background, since the main design of the Wellington Memorial is essentially architectural. In another respect, the contrast between the two groups is striking enough, in regard to their object. The one was part of the decoration for a temple of Pleasure, the monument of a reign of unprincipled luxury; the other, which stands at Burlington House now, is to assist in commemorating a hero, the motto of whose life was "Duty." In this case at least the higher motive has given rise to the higher and finer work of art.

"Valour and Cowardice" forms one of the two side groups which flank the upper part of the pedestal of the Wellington monument, eventually to be crowned, we hope, by an equestrian portrait statue, and of which not long ago we published an engraving. The corresponding position on the opposite side is to be occupied by figures of "Truth and Falsehood." In the group we now refer to, "Valour" is represented by a strong and noble-looking, fully-draped female figure, who sits, the right hand leaning on a club, the left arm holding a shield, looking round towards the left, as if in calm and undisturbed readiness to meet an attack. Beneath her feet crouches "Cowardice," a nude male figure, cowering low down beneath the shield, which covers his back and head, and from under which he peers with a countenance expressive of alarm, reminding one a little of the first stage of "fear" as depicted in Bell's "Anatomy of Expression." The figures are most successfully combined into one group, and the mechanical, as well as the artistic unity of the whole, is enhanced by the treatment of the drapery of the upper figure, which falls on and spreads over the shield of the other. Will any one be disposed to complain that the sculptor should have represented "Valour" as a woman, and "Cowardice" as a man? As these abstract qualities have to be made visible to the eye, however, no doubt the nobler appearance and expression are more easily attained through the female form; but, apart from that, if we consider the work as representing the highest attributes of moral courage, we take it that woman is not without reasonable, perhaps even unanswerable claims to the higher position. As to the sculpture itself, there may be, from a side view, a little want of weight and substance in the torso of the female figure (perhaps because it is slightly flattened against the architectural pedestal behind it). It would be hard to name any other questionable point: in greatness of style, in the large and grand treatment of the figures, in the whole conception and intention of the group, this production is not merely an honour to English art, it is one of the very, very few modern works one ever sees which recal something of the greatness of style of the zenith of Italian art, and it is hardly too much to say that were this work presented as a newly-discovered group by Michelangelo, it would be judged to be fully worthy of the fame of the great Florentine.

The recumbent effigy of the duke, for the same monument, can hardly be adequately seen as placed in the inner sculpture gallery; it is pretty evident, however, that the artist regarded this as a kind of conventional appendage to a monumental design, to be treated simply and unpretendingly, while the expressive power of the sculptor was bestowed rather on the accessory figures. Another fine monumental work is the model for the colossal bronze statue of Lord Lawrence by Mr. Woolner, erected in front of the Government House at Calcutta. It is in the simplicity and dignity of this figure that its effect consists, there is no attempt at any specially striking treatment. A cloak hung, with a natural appearance enough, over the left shoulder, supplies that breadth of surface and mass which modern costume in its simple form denies to the sculptor. Mr. Woolner's other contributions are on a much smaller scale, but of hardly less importance. His diploma work, a small alto-relief of "Achilles and Pallas shouting from the Trenches" (1,417), shows real greatness of style on a minute scale; Achilles, a strong, square-built, nude figure, stands with full front to the spectator, his hair blowing in the wind, the shield of Pallas, who stands on his left, forming a kind of nimbus at the back of his head. There seems a slight oversight in representing Pallas as mute and with closed lips, seeing that Homer distinctly says that the goddess joined her voice with his, and one would suppose that she should have been shouting also. Besides this there are several portrait works of Mr. Woolner's, of which the most interesting, perhaps, is the bust of Kingsley, for Westminster Abbey, and treated in a bold and monumental style suitable for such a situation and surroundings. The alto-relief statuette of "Sir Cowasjee Jehanger Readimoney" (1,422) is also a good specimen of portrait sculpture, somewhat after the bold simple manner of Flaxman; in both this and the "Achilles" it may be noticed how bold and free is the treatment of the marble, quite without the polished-up appearance of which certain Italian sculptors have set a fashion but too quickly caught up by many of our own artists.

Among other works in the Central Hall two, by a comparatively young artist, the "Eros" and "Persephone" of Mr. Simonds, show at least a gratifying tendency towards ideal subject on the part of an artist who last year exhibited one of those costumed figures with buttons, fur edgings, and what not, cut out in marble, which reduce the sculptor's art to mere *mécanique*. Of the two, "Eros" is the best as a figure; in the "Persephone" it appears to us that the curve outwards of the right hip is quite unaccounted for in a figure in motion, and that it is a treatment of the limbs which only belongs to a standing attitude, with the body thrown on one side and resting on one foot, and cannot occur to this extent in a figure walking straight forwards. The "Eros" does not come up to the ideal indicated in the quotation appended from "Love's Labour Lost"; the figure is a nude study, in fact, rather than an ideal work, but it shows a good intention. Mr. Marshall is not strongly represented in "From Stone to Life" (1,414), the statue of Pygmalion in the act of awakening to life; the surprised expression of the face is intended to be given without overstepping the repose proper to sculpture, but it would be difficult for any one to guess the purport or action of the figure without explanation. Are the legs a trifle short? Mr. Armstead's "Religion" (1,439), to be executed in bronze for a fountain at King's College, Cambridge, is rather prosaic in idea; a seated figure holding on her knee a model of King's College Chapel! This is hardly a very broad or adequate manner of expressing religion; nor is the figure by any means equal to the fine companion figure of "Philosophy," exhibited last year. The two large figures of Baxter and Priestley, recently erected in Kidderminster and Birmingham respectively, are represented by their plaster models; Baxter is much the more successful as a statue, and from the nature of the costume offers a better object for sculpture; but neither rises above the level of respectable productions: they do not bring home to us the individuality of the men. A figure of "The Diver" (illustrating Schiller) (1,426) is an unfortunate instance, though well executed, of the misuse of sculpture, which cannot be made satisfactorily to represent such out-of-the-way and momentary action as in this figure shooting head foremost, with its feet sticking up in the air. It is an able work, though the position is a mistake. A really clever thing is Count d'Epinay's "Spartan Boy" (1,443) with the fox under his cloak attacking him; the attempted laugh of the lips that are quivering with pain, and the spasmodic contortion of the toe from the same cause, tell the story almost without a title; and the figure is modelled with equal care and spirit. The "Berceuse" of Dalou (1,441), one of the best we have had here of his realistic studies of modern figures, represents a mother singing her baby to sleep in her arms; the costume is treated with a more sculpturesque breadth of manner than in some others of the artist's similar subjects; the modelling and pose of the mother's head are charming in every point of view except the full front face, where the open mouth is not pleasing: the child is perfect in attitude and the characteristic details of infantine form; even the back view of its little head is quite a study.

We notice with pleasure, at either side of one door of the central hall, two of the studies submitted for the Academy medal for sculpture this year, those of Mr. Webber and Mr. H. Thornycroft. The subject, it may be remembered, was "a warrior bearing a wounded youth from the battle-field"; the opinion which we expressed, at the time of the exhibition of the students' works, of the high merit of the sculpture designs, seems to be a general one. We are glad to find that the Council of the Art Union of London propose to endorse the decision of the Academy by producing Mr. Thornycroft's design in bronze for prizes. Among the line of busts in the vestibule, which always reminds one of so many pins' heads in a row, are one or two of distinctive artistic character: Miss Foley's medallion bust, in low relief, of "Mary Howitt" (1,348), for example, a finely modelled face of regular and strongly marked features, with a contrast of surface given by the lace hood over head and shoulders, the texture of which is roughly but sufficiently indicated in the marble. Mr. Boehm's terra-cotta bust of the "Earl of Shaftesbury" (1,364) has spirit and character; there is force of style in Mr. E. Davis's bust of the late Bishop Thirlwall (1,358), to be placed in the "Abbey," as also in Mr. Schots's medallion portrait (1,356) of a feminine head with, however, very bold and masculine features. Mr. Bell's large figure of "Peace contemplating the Map of the World" (1,347—she is not getting much satisfaction out of her contemplations at present, we should think) is intended for the centre niche in the great hall of the Foreign Office; it is a figure with a good deal of placid—rather too placid—feeling; will it have a side view as well as a front view in its intended position? The side view is the best, but a "niche," in the ordinary understanding of the word, would not allow of this. Among the best things in the vestibule are the small terra-cotta panels in alto-relief, by Mr. Tinworth (1,380–1; 1,391–2), who exhibited some similar works, but hardly equal to these, last year; the scene of "Paul and Barnabas at Lystra" is full of spirit, the small heads (the figures are barely 2 in. high) very expressive; so is also that of "Judas" coming and throwing down the thirty pieces of silver before the priesthood. A "Young Dante," by an Italian sculptor, is, as Mr. Sala said of his own farce the other day, an "awful warning." Mr. Joseph Durham exhibits a design for a bronze drinking-fountain, far superior to what is generally used for such purposes, but scarcely up to his own mark.

The sculpture-gallery, beyond the octagon, contains the usual quota of busts, out of which some good ones may be picked. There is a characteristic and highly recognisable likeness of "Le terrible Cole" (1,453), by Mr. Boehm. The only other we feel moved to mention is an ideal bust by Mr. Lawler, "Mater Dolorosa" (1,468), a very beautiful head, drooped sideways, beneath overhanging drapery, which casts a shadow on the face. This "gallery" is not an encouraging room to contemplate, in fact; but, on the other hand, it may be asked, what sculptor would wish to send any important work to be placed in such a bare, uninviting room as this? Surely a little judiciously-applied colour, a little drapery, and other such accompaniments, would better set off the sculpture, and prove a little more attractive-looking than these bare and dingy walls. In our opinion, sculpture requires coloured accessories to give it its full effect, to throw out by contrast the forms of the pure cold marble, as well as to correct the chilling effect on the eye which must always result from the collection of a number of sculptured works in one apartment with no such correcting or balancing influence. If the sculptors who are Academicians would procure some change in this respect, they would greatly enhance the effect of their own works, besides rendering the sculpture-room more attractive to visitors.

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THE PHILADELPHIA EXHIBITION, AND A SOMETHING TO LOOK FOR.

THE opening, auspicious as it was, of the Philadelphia Great Exhibition, on the very centenary day of the existence of the Great Republic, again calls attention to the precise nature of these international shows, and to the precise work they do, and are expected to do. As far as the mere novelty and freshness go, no Exhibition can well compare with our own famous one of 1851,—at least, to English people. Everything was then, or seemed to be, *new* and striking,—the building, its decoration, and its contents, and more than all, perhaps, the additional charm that was felt in it from the fact of the Royal patronage accorded to it, and from the intimate personal interest taken in it by the ever-to-be-lamented Prince Consort. It would be obviously impossible to repeat or rival such a novelty as this was, all things thus helping and aiding it. But the question may come yet whether it would not be possible to hint at an Exhibition somewhat better calculated in some ways to do the work which at present the world most stands in need of. We are here referring to the artistic outcome of it. Perchance a few words may be of interest and use just now.

In the first place, it must strike all who have ever looked or thought for a moment about such matters, both principles and things, that there is a most vital and inherent difference between the art-production of to-day, pretty nearly the same all the world over, and the art of past times, wherever we may go to look for it, or in whatever style and character it may have been. The absence of machinery in days gone by, the absence of our now all but universal "division of labour," the little knowledge in past days which one nation had of others, even when close together, and a whole multitude of other differences, made the past of art-production altogether different from the present. Everything would seem to have been wanting, and the wonder really is, if our modern system of doing things is a progress, and the right one, how it is that the ancients have left anything at all worth the looking at or the thinking about. We have often fancied ourselves in antique Athens or old Imperial Rome, and wondered what sort of "Great Exhibition" either of those world-famous cities would or could have held or could have conceived; and what the wise men of Athens would have urged upon the attention of the "schools;" supposing, for a moment, the idea possible in any sense of practical realisation. Had such a gathering of the objects of the then known world occurred, what sort of show could it have been, and how could it have been divided, and what would its "sections" have been, and how utilised? About much of this we may speculate with not a little certainty. The Greek himself, the Athenian, must have reserved a section for his own special work, that is certain; and we can judge of what that must needs have been with some accuracy. It was *sui generis*, pure Greek work,—unborrowed, and essentially the Greek's own. We should have seen specimens of his architecture, his sculpture, his painting, and house furniture, and woven fabrics; the things of his public and his home life. None of these wonderful objects, by the way, could have been shut up in "glass cases," a matter of more import than many may think. What would the world now not give for a sight of this section of the antique world's show, with all things in it "hand-made" work, and thus to so great an extent impressed with the artistic individuality of the working artists who produced them? We must have seen the old Greek, as it were, at his bench or his loom at work, and as writing on the material he was moulding into form. We might have seen, perchance, the great Phidias himself, and the Jove starting from the marble block as the work of his hand.

Well, this Greek section, being thus a thing apart, and thus powerfully impressed with the individuality of the Greek mind and hand, we may fancy ourselves looking into the Egyptian section of this antique exhibition. And what could this, then, have been? Why, even stranger than the Greek, and older in aspect, and far more unlike the things of the then present. All about us original, and purely and solely from Egypt; unborrowed most surely from any source, and coming as plainly and vividly from the brains and hands of Egyptian workmen and artists as did the Greek from Greek. There could be no mistake about it. There is no "influence" to be detected anywhere or in any special object. If there be merits those merits are Egyptian; if there be defects, why those deficiencies are Egyptian too. It is like the seeing into another world,—a world of colossal forms and strange imaginings. As unlike the Greek as the Memnon is unlike the Theseus. All this to the Greek would, indeed, have been a something *new*; but how was he best to make *use* of it, being, as he was, so thoroughly up to his own special work,—his, as we now term it, all but *perfect* work, as far as the word perfect applies to things human. In the Philadelphia show what would be thought by its national artist contributors of a newly-sculptured form of purely Greek workmanship, and fresh from the artist-workman's hand, its essential merit lying in the fact of its being Greek, and Greek only? The antique Greek did not *borrow* from the Egyptian, or from any other art-source.

We might thus go on and pass into the Assyrian section of the old Athenian show, and thence to the Persian, and then again to still more remote individualities,—to ancient India,—a world in itself; and then perhaps to spots in this earth's surface, where the humanity on them would seem to have almost sprung out of the very earth itself, as a something apart and away from the rest of the world, so separated, and distinct, and individualised are they, with languages, arts, modes of life, and beliefs, altogether their own. Each one complete in itself, and, where admitting of improvement or progress, if that most modern of words at all applies to them, it sprang up from their own inherent art-consciousness and art-instincts,—a growth, in the true sense of that word. A subject well worth further development and analysis, by the way. How different, therefore, would an "antique" exhibition in Athens or Rome have been from the present show in Philadelphia. All things were and are the reverse of each other. In the antique all was hand-work. In the modern display almost everything in it will be found to be the result, either of machinery or the result of that "division of labour" which now goes by the name of "manufacture." In the antique collection, the work was the work of men who knew nothing of any art but their own, *e.g.*, the Greek, and never dreamed of borrowing a form or idea, still less of directly copying the forms of a past art, either about them or more distant from them. In the modern vast gathering of all kinds of objects, useful and ornamental, there perhaps will hardly be found one that has not been more or less "influenced," at least by some art foreign to the artist or artists who produced it. Large numbers of the things to be looked at so curiously will be direct and literal copies of the art of the past, professing to be naught else. It would be difficult to exaggerate the significance of these differences, whether it be thought that such differences in the *modus operandi* be an improvement, as respects the modern system or no, over the antique. We must needs suppose that modern and new Philadelphia in this year of grace, with all its added advantages and means, must be able to do infinitely better work, all ways, than could the old world,—so far off in time and means. And yet are the *facts* of the case patent enough. The hitherto unrivalled Greek must hold its own even in Philadelphia!—modern and new as it is. These facts are, as we think, well worth the consideration of those who trust too much in the potency of these Great Exhibitions.

We would, by way of help, venture to hint at one or two matters which might be found useful—at any rate suggestive—in any *future* Exhibition in this country, at least. Of course, we are not to forget the tendency of the age all through what is somewhat loosely called the civilised world, to induce, all the world over, a sort of cosmopolitan uniformity, with a desire to impart to others, all the world over, the improved ideas, artistic and otherwise, we ourselves hold so tenaciously and prize so highly. This is well, doubtless; but it is not to be forgotten that all the world is not alike,—the soil, the climate, and the humanity differ essentially and inherently. It is not the least among the wonders of creative skill that human nature, though it be everywhere akin, is yet in detail diverse and unlike,—as much so, indeed, as can well be imagined possible. In the old world this was to be seen plainly enough, and the results of it were and are patent enough; but to look at a modern show, exhibiting results, we might almost imagine that there existed but one type of the *genus homo*, so much do the results of the human action resemble each other, from whatever quarter they may happen to come. A sort of machine-made and universally applicable *pattern* is everywhere about us, and certainly pervades these world shows. If, then, there ever be here another "Great Exhibition," would it not be possible—nay, desirable—to ask from the foreign exhibitor, not so much the results of his power over and with machinery, made for him perchance, but as much as may be of his own art language, and of his personal power over the materials he moulds into form?

A thought more and we must needs pause, though there be so much more that might interest, even while glancing thus generally at matters. Look for a moment at the vast means and well nigh boundless extent of the New World, even as represented in this Philadelphia display: may we not ask, and may be not in vain ask, for a something from the place itself? In the past, as we have noted, each separated nationality could have offered to the world's gaze an art, and architecture, and a material mode of life and life's surroundings all its own, and peculiar to itself, each one individual in interest. The place might be small, like Greece, or of indefinite extent, like Assyria, but it was always equal to its own work, and would proclaim its capability to do its own work in its own way. And surely there must have been an advantage in this exertion of individual artistic power and national action. We own this now in the results of it, and by the way in which we prize it when we pick up fragments of it. It is to be feared that but little, if anything, of this will be found in this American show. But yet ought not the *new world* to give birth to a new art, to a something different from the old and well-worn world? *Copies* are but poor things at the very best, even when direct, and done on the spot, and from the original work—but how very poor the work then must be, and needs must be, when all the original inspirations are remote, all made for other times, and for other peoples, and may be for quite other purposes! It would be a right curious thing to go through this Philadelphia display, and search, as narrowly as may be, for some sign, however small it may be, of purely original and national thought, and work, and art.

SALONICA.

THE city of Salonica, the scene of the recent sad display of Mohamedan fanaticism, owes its former and present importance to its spacious roadstead, offering convenient and safe anchorage, and to its being the converging-point of the high-roads leading into the interior. It formed the natural staple-place on the most north-western bay of the Greek Archipelago for the traffic of the Macedonian and Pæonian highlands. From very ancient times the town of Therma flourished here, which also gave its former name to the bay; but it rose to still greater importance when, in 315 B.C., Cassander founded in its place a new city, which he called Thessalonica, in honour of his wife, a sister of Alexander the Great. It soon became the principal emporium of Macedonia, and has since then always maintained its rank. At the present day it is the most important port, next to Constantinople, of European Turkey. In the time of the Romans, about 148 B.C., a great road, the Via Egnatia, was constructed from Dyrrhachium (modern Durazzo), on the Adriatic, to Byzantium, the centre and principal bulwark of which was Thessalonica. Its course at the present day forms the only straight line within the walls of the modern city of Salonica, the old pavement lying buried deep under the *débris* of centuries. There stands still at its eastern exit from the city a Roman triumphal arch, rich with reliefs, from the time of the Constantines. Another principal road leads to the north, along the marshy deposits of the Vardar, the ancient Axios—the railway built by Baron Hirsch takes the same route—emerging from the defiles of this river, the Iron-gate of Macedonia (Demirkapu), to the corn-yielding Pæonia, where it branches on the one side towards Albania, on the other towards Servia. At present the railway goes only as far as Mitrovitza, but has already developed an active traffic.

The numerous ruins which have been laid bare from time to time in the city by excavations, as well as the columns which, originally forming part of temples, were used in the construction of the churches which now serve as mosques, bear testimony to the importance of the city in the time of the Romans. St. Paul, as we know, founded here a Christian community; an antique marble pulpit beside the church formerly dedicated to St. Sophia is still pointed out as

the place where the Apostle preached. Here also rose the basilica with five naves over the sepulchre of St. Demetrius, martyred A.D. 306, during the last persecution of the Christians under Galerius. Of greater age is the original mother-church, a round edifice with costly mosaics in gold, as also the present mosque of Eske Dyuma, a building supported on Ionic columns, which originally was a temple dedicated to Aphrodite, and then a church. But the ground upon which the modern city stands is steeped in blood. We need only call to the mind of our readers the fearful vengeance wreaked by the orders of the Emperor Theodosius in 390 A.D. on the citizens, who had risen in rebellion against him; about 8,000, according to others, 15,000, were crowded into the circus (in the south-east of the city), and there mercilessly massacred by the imperial soldiers. The military importance of the city made it the subject of repeated attacks in several wars, until it was taken in 1430 by Sultan Murad II. For a long time, until almost recently, the walls and towers remained as a proof of the Byzantine style of fortification; now they are in a state of dilapidation, or have been razed, the citadel being a heap of ruins. From this commanding point the eye ranges as far as the mountains of the peninsula of Chalcidice, and towards the south-west, on the verge of the horizon, tower the mountains of Greece, Olympus and Ossa.

The Jewish population of the city is the lever of all mercantile activity in the port. We are informed that the Jews were already settled here at the time of the Apostles, but they greatly increased during the period of their cruel persecutions in Spain, when large numbers found refuge in Salonica. They form at the present time about two-thirds of the entire population, estimated, somewhat highly, at 100,000; Musulmans and Christians forming the remaining third. The Jewish element is so preponderant that a ship which has to load on a Saturday finds it difficult to get hands willing to work on that day. There are numerous tanneries and dyeing-works in the city; the country round supplies wine, corn, bees-wax, cotton, silk, and tobacco. The goods are carried principally by the Austrian Lloyd, the French Messageries, and several other lines. The Turks in Salonica, with the exception of the governor and his surroundings, make a miserably poor impression. They live in one of the most wretched quarters of this indescribably dirty city.

ORNAMENTATION OF THE TRANSITIONAL PERIOD.

NUMBER II. of the Second Part of Mr. Sharpe's work on "The Ornamentation of the Transitional Period," which is now published, contains pier-capitals, doorways, and arcades; the examples of the capital illustrating the variations of treatment of this feature from the period when it still retained the general character of the Norman style, though with variations in detail, to that when, as in the last example given in the book (from Inner Porch, St. Mary Redcliff), the detail, except for the square abacus and some trifling peculiarities of the impost mouldings, could not be termed anything but Early English.

The experimental and tentative character which belongs to the work of this period is illustrated very well in this volume. The two capitals in Plate I., from Irthington Church, present side by side a scalloped capital, with a generally Norman aspect, while the adjoining example from the same church is decorated with a flat conventional leaf, repeated with great regularity, a broad and a narrow leaf alternately, in a style quite out of keeping with Gothic feeling, as usually defined. Curiously enough, both these capitals are left unfinished at one angle; at least, we presume the drawings show them as they exist. In the two capitals from Canterbury (Pl. 12, 13), the reminiscence of the Classic acanthus-leaf is plainly shown; in one case this quasi-Classic leaf occurs on the centre or main capital, while those of the three-quarter shafts adjoining it display pure Gothic forms. The occasional tendency to experiment with a repetition of foliage ornament, the same leaf repeated all round the capital, is illustrated in examples from Whaplode and Moreton, which are among ideas tried and condemned, for they never appear in full Early English Gothic. The band round the shaft, which is so effective a feature, and is always at the same time so judiciously and sparingly used in Early English work, occurs in profusion in the doorway of Easton Church (Pl. 18), where there are three rings round each of the six jamb-shafts, in a height of apparently about 8 ft. The character and effect of this is much more like that of modern Gothic, in which there is such a tendency to divide the larger lines of design and construction into sections in this kind of way, and it is curious that the progress from this over-use of the band to the Early English use of it is the reverse of what we generally find in architecture, where almost invariably a feature at first used sparingly, is afterwards multiplied and exaggerated. The doorway from Durham Castle, on the next page, is perhaps one of the wildest examples extant of the variation and enrichment of the characteristic forms of ornament which originally belong to the pure Norman style; we scarcely know our old acquaintance, the zigzag, again under such altered conditions and combinations; and one order of the archivolt mouldings presents the most extraordinary appearance in a regular series of slight projections from the general plane, round which projections the whole of the mouldings are worked, as if for the mere pleasure of working mitres. The engraving of part of the triforium arcade from the north transept of Ripon is a very fine example of some of the best features of this formative and suggestive period of Gothic architecture.

The lithographed drawings have been carefully shaded, and show perfectly what they are intended to show, but we cannot help observing the change in style and manner of execution between this and previous numbers, which, we fear, must be taken as indicating that the author of the work, who adds to his architectural and archæological learning the repute of one of the most admirable draughtsmen of architectural detail living, has been prevented, from want of time or otherwise, from giving to the book as much of his own handiwork or his own personal influence on the style of the illustration as he has given to former works. The illustrations are quite adequate to their purpose, but we miss the style and touch which used to characterise Mr. Sharpe's illustrations; the shading is sometimes overdone and often scratchy in execution, which never used to be the case; and we feel compelled to call the author's attention to defects in the perspective of some of the details; the base of the pier from Fountains (Pl. 4), for instance, which is very bad, and some other unsatisfactory details, such as might hardly be noticed, only that the execution of the illustrations to Mr. Sharpe's previous publications has been so completely a model of workmanship that one is desirous to see the same high standard kept up.

CONCRETE AS A BUILDING MATERIAL.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

AT the ordinary general meeting of this Institute, held on Monday evening last, Mr. Charles Barry, president, in the chair, Mr. Edward M. Forster, of Duke-street, Manchester-square, was elected an Associate.

The discussion on Mr. A. Payne's paper, "On Concrete as a Building Material," was resumed.

Mr. Lascelles said that at the last meeting Mr. Whichcord had asked him whether iron embedded in concrete was affected by heat. In reply, he might quote the testimony of Mr. Matthew Allen, which was to the effect that in a fire in a warehouse in Finsbury, everything except the concrete lintels gave way. In each of these lintels was embedded a piece of iron 3 in. by ¼ in. The proportions of the ingredients of the concrete were 1 of cement to 6 of breeze. The lintels were formed in position by means of a rough boxing of wood. Mr. Blashill, at the previous meeting, had spoken of the deposition of moisture on the surface of concrete, but that was a thing impossible on concrete properly so-called. He considered that concrete had a very important future before it, and with this material he was endeavouring to solve the great cottage problem. He was trying to produce a cottage which could be let at a moderate rental, and that could only be done by minimising the material or by devising some new mode of construction. The reduction of the thickness of the walls from 9 in. to 1 in. or 1½ in. was, he was persuaded, a step in the right direction. He hoped to succeed in building good four-roomed cottages for 100*l.* each, and if so it would be a great triumph for concrete.

Mr. P. Brannon, C.E., said that in 1872 he had addressed himself energetically to the question, and succeeding in producing a material which, while capable of resisting a great compressive strain, also possessed great tensile strength. Of that material he had made window-frames similar to the one exhibited by Mr. Lascelles at the last meeting. He (Mr. Brannon) had demonstrated that the best possible fireproof doors were to be made of his patent stone-felt. This material had been used in rendering fireproof that portion of the dome of St. Paul's Cathedral to which the public have access, and Mr. Penrose, the architect to the Dean and Chapter, had satisfied himself of the thorough efficiency of the material to resist fire. This was the material which should be prescribed by the Building Act for fireproof doors. Iron doors were not fireproof; for at high temperatures they would melt, and at a low temperature they would twist and bend. It was a mistake to use quartzose material and flint for concrete, for such materials would not withstand heat.

Mr. Cates said he had been with Mr. Brannon that afternoon to see the concrete doors fitted up by that gentleman at the King-street picture-galleries. They were six-panelled doors, and produced a hard metallic ring when knocked. They appeared to be as homogeneous and as likely to resist fire as Mr. Brannon had stated, and the application of this material was deserving of the fullest consideration at the hands of the profession, because it must be admitted that unless in the most expensive form, iron doors were exceedingly unsatisfactory, regarded as means for preventing the spread of fire.

Mr. Drake said he was glad that Mr. Payne had commenced his paper with the assumption that the constructive value of concrete was fully recognised, and that he had sought to suggest means for its architectural treatment. From this aspect of the subject the discussion had somewhat strayed. He believed that almost, if not quite, all the instances brought forward of the failure of concrete were samples of the old-fashioned lime concrete, which was a subject quite apart from Portland cement concrete. As to shrinkage, he knew of no instance of it in all his experience. He knew that cracks had appeared in concrete, but these were the result of settlement in the foundations, and were not due to any tendency to shrinkage inherent in the material. He had built as many as forty cottages in a row, with a continuous frontage of 15 ft. or 16 ft. per cottage, and at other times he had built fifteen, twenty, twenty-five, or thirty, of such cottages in a row; but had never known a single crack to occur. At the last meeting of the Institute it seemed to be laid down as a law of nature that concrete *must* crack, just as iron would expand or contract. Mr. Payne had suggested in his paper that, in order to simplify the apparatus used in concrete building it might be advisable to make the guiding parts or standards integral parts of the finished structure; but that would be not only unnecessary, but exceedingly costly. Embedding iron inside the concrete was quite another matter, and it had been done to a considerable extent, and with great success, by Mr. Matthew Allen and others. It had been said, in the course of the discussion at the previous meeting, that concrete was a material which would give "scamping" builders an opportunity for exercising their talents. But there was no more difficulty in preventing "scamping" in concrete than in any other material. The quality of the cement and other materials specified should be sternly insisted upon. As a matter of fact most concrete buildings were constructed by professed concrete builders, who were too jealous of their own reputation to use bad materials, and who took the precaution of having a guarantee with all cement supplied to them. As to the chapel at Whitehaven, referred to by Mr. Banks as exhibiting cracks owing to shrinkage, from inquiries he had made he was satisfied that such cracks were due to the unequal settlement of the building.

Mr. Banks maintained that the cracks were due to shrinkage, and not to settlement.

Mr. Tall said he had studied the subject of concrete building for twenty-one years, and he agreed with Mr. Drake as to cracks. Mr. Goodwin had built nine large concrete warehouses in London, close to Blackfriars Bridge, and there was not a crack to be seen in any of them. The first of these warehouses was erected under a licence from the Metropolitan Board of Works, who specified that no material should be used which would not pass through a 2-in. mesh. Mr. Tall, however, was satisfied that by "packing" the wall with larger pieces of stone the construction was stronger, and he proceeded to

carry out the work in that manner, and for this he was summoned three times by the Metropolitan Board of Works, who were eventually obliged to admit that he was right in stating that the work which was "packed" with large pieces of stone was stronger than that made with small pieces of material. As to the question of materials, he considered that burnt ballast was one of the best possible aggregates. In the first place it was very plentiful, and was stronger than gravel ballast. Next in order of value came "clinkers" from furnaces. The harder the ballast was burnt the better. One peculiarity of concrete made with this material was that a nail could be driven into it, and it could be cut in the same manner as Portland stone. It might also be cast in any form. Slag was also a very good material for concrete, provided that it contained sufficient breeze. He had made a floor of this material 19 ft. by 13 ft., without any iron joists. This was his first attempt in that direction, and was very successful, and he next made a floor, 40 ft. by 16 ft., also without iron. It was 4½ in. thick at the crown, and 11 in. thick at the springing, flat at the top. To the floor above he gave a springing of 18 in., but built 9 in. walls, and 6½ in. cross-walls upon it, and it still stood without crack or blemish. Some people went so far as to say that seven parts of ballast to one of cement was amply sufficient for all practical purposes, but he could not agree with them, as the proportions would vary according to the treatment.

Mr. C. F. Hayward remarked that, as there was still a considerable amount of doubt as to the strength of concrete, clerks of the works should be scrupulously exact in seeing that the terms of the specification were complied with. But while concrete building needed considerable looking after, so did all building.

Mr. Rowland Plumbe said that five years ago he built a terrace of model dwellings in concrete, consisting of seven houses, the front wall of which was continuous. The materials used were six of burnt ballast to one of Portland cement, and the result had been very satisfactory. The buildings were put up by one of the concrete patentees, and he had every reason to be satisfied with the result. He had lately seen the buildings, and they appeared to be quite free from cracks. During the course of the works he had made several experiments to test the strength of the material, and had found it impossible, by leaning his back against a wall, to kick a hole through a 2½-in. partition-wall, 10 ft. long and 6 ft. high. He thought, however, that concrete was not sufficiently impervious to make a dry house unless coated with plaster, and that being the case, the architectural treatment of concrete involved the question of the architectural treatment of plaster. Whenever plaster was used for facing concrete walls, it should be simply treated with incised lines or ornament, and should never be made to appear like stone. As to the relative cost of concrete and brick buildings, he had sometimes found, on inviting tenders, that instead of concrete buildings being ten per cent. cheaper than brick, the tenders were ten per cent. in excess of those sent in for ordinary materials.

Mr. Dawson pointed out that the concrete which had escaped unharmed in the fire at Sir Sydney Waterlow's buildings was made of breeze, a material which had already been burnt, and which was therefore incapable of being burnt again. It was important, therefore, in using concrete in buildings where fire was likely to occur, not to use materials which would be calcined by the heat.

Lord Elcho said he took a very great interest in the subject of concrete, particularly in reference to its capabilities for cottage-building; for cottages built with the ordinary materials cost from 15 per cent. to 20 per cent. more at the present day than they cost a few years ago. He had personally examined and tested a concrete bridge being erected by Mr. Brannon over the River Axe, Devonshire, for Sir Walter Trevelyan, and had been astonished at the resistance it offered to the impact of heavy weights. He had also examined the fireproof concrete doors of the King-street Galleries, and they were apparently the very thing required for our national picture-galleries and museums.

Major Seddon, R.E., said he had used concrete very largely for barracks, both for walls, floors, and roofs, and was thoroughly convinced of its constructive value. From his experience he did not think that contractors were desirous of "scamping" concrete work; they were rather disposed to be careful, for it was a material they were rather shy of unless they were professed concrete builders. When concrete buildings erected by general contractors failed it was generally from ignorance of the nature of the material, and not from wilful "scamping." Contractors were not alive to the necessity of the cement being fresh burned. He had made an experimental slab 14 ft. 6 in. square by 6 in. thick, and after twenty-one days' setting, it had been supported at the edges on brick walls and tested by eighty-four men marching, "doubling," and "doubling out of time,"—a very severe test,—over it, without any sign of failure being visible. This same block or slab had afterwards failed with 10½ tons of dead weight placed upon it in the centre, which, by mathematical calculation, he had ascertained to be about one ton more than the live load, so that had there been twelve more men engaged in the test the slab would probably have given way under them. As to iron, he preferred to use it outside his concrete, and not embedded in it, for it was impossible to tell what the iron was doing when it was hidden from view. This slab was composed of one of Portland cement and four of brick ballast, gauged to a 1-in. mesh, and kept well watered for seven days. He had another slab made, 6 in. thick, 14 ft. 6 in. long by 6 ft. 9 in. broad. This slab was subjected to the marching and "doubling" tests of forty-five men, which did not affect it; it was then loaded with dead weight in the centre, and when fifteen tons was upon it, or 3 cwt. per foot super., it began sensibly to bend. With thirty-two tons upon it, or 6·53 cwt. per foot super., it cracked slightly. It was then loaded up to 42½ tons, or 8·8 cwt. per foot super., but the cracks did not increase, for the compressive strength of the material came into play at this point, the outside edges of the slab being tilted up to the extent of ¾ in. This material made a perfectly impervious roof. He could not positively affirm that concrete had not a slight tendency to shrink, and therefore to crack; such a condition might be dependent upon some alteration of the form of the particles consequent on crystallisation.

On the motion of Mr. Roger Smith, seconded by Mr. Aitchison, the discussion was adjourned to Monday, the 29th inst.

NEW SEWAGE WORKS AT WIMBLEDON.

For some time past a plot of land, about fifty acres in extent, has been in course of preparation by the Wimbledon Local Board, for the purpose of disposing of and otherwise utilising the sewage within the parish, and the works are now almost completed, and will shortly be in operation. The sewage works are situated on the south side of the railway, lying between Wimbledon and the Tooting Cemetery, and immediately adjoining the ground upon which the new cemetery for Wimbledon is now in course of formation. The area of land which is intended to receive the sewage has been laid out in contour beds, each bed being supplied with a separate system of pipe-carriers, with a regulating valve to regulate an exact flow to such beds. In connexion with the filtration area, provision has been made for dealing with a large quantity of storm-water, and one filter-bed has been constructed upwards of an acre in extent, and composed entirely of burnt-clay ballast, and thoroughly underdrained. This filter-bed will be used only in times of storms. The system of dealing with the sewage is a combined chemical and intermittent filtration process, which is stated to be one entirely new and novel. Under this process the sewage in the first instance passes through chloride of magnesium lime, and after five hours' subsidence the water is conveyed upon the land along the pipe-carriers already named. On a small scale, it is said that this system of dealing with sewage has been in daily operation for the last five years, with satisfactory results, the consequence being, as we are informed, that many towns have recently adopted it, including Edmonton, Tottenham, Taunton, Aldershott, and several other places. The effluent water is stated to have been frequently analysed by the chemists attached to the Lea Conservancy, and other chemists, and its purity to have been such as to admit of its free entry into any running stream without fear of pollution. The author or inventor of the process is Mr. W. J. Rowell, the surveyor to the Wimbledon Local Board, under whose superintendence the works have been carried out, the contractors being Messrs. Neave & Son.

The engine-house and other buildings on the works, containing the machinery for dealing with and pumping the sewage, are neat and substantial structures. The engine-house forms the central portion of the main block, and is approached through a lofty Gothic doorway, the elevation being surmounted by a gable. The boiler-house and tank-house are on each side of the engine-house, and are likewise surmounted by gables. On the right and left of the central block are the engineer's residence and that of the keeper of the sewage farm, both being uniform in their external appearance with the first-named portions of the buildings. The materials used in the buildings are white brick, with red brick dressings and bands.

THE HEALTH AND SEWAGE OF TOWNS.

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The committee of the Leeds Corporation, having charge of these matters, had had this question under their anxious consideration for two years before the date of this injunction, and had appointed in November, 1867, a special committee to consider the whole subject and to report.

This committee accordingly inspected every feasible plan which they heard was in operation at any place, including :—

1. *Worksop.*—Precipitation by lime system.
2. *Croydon.*—Irrigation.
3. *London.*—A portion irrigation at Lodge Farm, Barking; the rest pumped into the Thames.
4. *Hertford.*—Chloride of lime.
5. *Rugby.*—Irrigation.
6. *Bradford.*—Holden's process, lignites, clay, and lime. H. A. Bonnewell's patent.
7. *Harrogate.*—Irrigation.
8. *Leicester.*—Lime process.
9. *Birmingham.*—Subsiding tanks.
10. *Coventry.* — Filtration; not successful; then about to commence irrigation.
11. *Leamington.*—A B C process.
12. *Stroud.*—Sulphated clay.

This refers to 1869-70; since then, some of these places have adopted other modes, as,—

Hertford.—Phosphate sewage.

Birmingham.—The lime process, with manufacture of portion of the sludge into cement by General Scott's process.

Coventry.—Sulphate of alumina. Dr. Anderson's process.

Bradford.—Lime and filtration through coke.

Subsoil drainage and earth-closets had the attention of the committee, but were dismissed as not likely to meet their requirements; whilst for irrigation, the sewage would have to be pumped to a considerable height, or carried about twenty-five miles towards the Humber before sufficient suitable land could be obtained. The great outlay involved by either of these processes led the committee unanimously to the conclusion that some system of precipitation was the best adapted to the wants of Leeds. Of these, none appeared to offer the same advantages as that of the Native Guano Company, known as the A B C process, and although the report of the Rivers Pollution Commissioners of the 4th of July, 1870, was very unfavourable, the committee at that time knew of no other mode which offered any better prospect of success,—the company saying they could purify the sewage, and make the manure, at 2*l.* per ton, whilst the commissioners valued it at 32s. If this could be realised, the committee saw that the cost would in a large degree be covered, and they looked, by the help of further inventions and experience, to be able to reduce the cost, still keep up the value of the manure, and effect their great primary object, the purification of the sewage. These expectations have been more than realised; for if a market can be found for the manure at even 20s. per ton, the total cost of working on this system will be covered.

Eventually an agreement was made with the Native Guano Campany, the Corporation undertaking to erect works to treat 2,000,000 gallons daily as an experiment, the company to work the process with a stipulated share of the proceeds.

This was done, and the company carried on the work at the experimental tank for a considerable time. The effluent water produced was watched with much interest, and analysed by Dr. Frankland and others. Dr. Frankland's report was that in this effluent the polluting power was "only slightly beyond the limits proposed by the Rivers Pollution Commissioners," and this standard, it is known, is very high. A fish lived and thrived in the effluent above three months, whilst another, similarly treated, and placed in a glass globe, but supplied with the town's water, died about two weeks before, thus proving to the committee, notwithstanding the Commissioners' report, that the A B C process would suffice for the purifying of the Leeds sewage, and that the effluent could be no nuisance to the inhabitants below Leeds.

After our experience with the trial tank, the committee resolved, whilst not binding themselves to the A B C, to construct works sufficient to deal with the entire flow of sewage (now between 12,000,000 and 14,000,000 gallons daily) by precipitation, such works being adapted for any precipitation process. These works have been constructed at a cost, including 25 acres of land, trial works, workmen's cottages, &c., of about 60,000*l.*

The Native Guano Company not being able, in the face of all the opposition they encountered (official, professional, and otherwise), to sell their manure, on which their success depended, were compelled to discontinue working the process, and terms were arranged between the company and the Corporation, annulling the contract between them.

The establishment of the value of the native guano being of vital importance to the company, they published numerous testimonials as to its value, but these failed to create a demand. The committee, to satisfy themselves as far as they could on this point, made trials on six half-acre plots in various dressings, the result showing an advantage of 9s. 1d. on the produce of hay for two seasons, on the plot, in favour of the native guano at 3*l.* 10s. per ton, the value claimed for it by the company, over Peruvian guano at 15*l.* per ton, whilst the quality of the hay was the best of any, though calculated all at the same price. (See two reports herewith.)

As the experimental tanks, &c., were at liberty during the construction of the permanent works, the committee advertised, inviting any one who had a better system to propose than the A B C, to test it at the trial tanks, and several responded to the request.

1st. General Scott—Purification by lime and manufacture of sludge into cement.
2nd. Councillor R. W. Moore, for a friend of his.
3rd. Silvester Fulda—Glauber's salt.
4th. Jackson & Watson, of Great Ayton.
5th. R. Goodall—Estimating cost of material, 7s. 6d. per million gallons.
6th. W. Prange, Liverpool — Whitthread's process.
7th. Phosphate Sewage Co.
8th. Waterson & Co.
9th. Bailes & Crowther, Armley, near Leeds.
10th. John Hanson, Dewsbury.

Of the 2nd, 4th, 6th, 7th, and 8th, it may be said the plans proposed were not tested, the promoters either not foreseeing a successful issue, or not being willing to bear the cost of a trial; and of the others, that they offered, in the opinion of the committee, no advantages over the A B C process.

1st. General Scott did not propose to do more than convert the residuum into cement without loss, the Corporation bearing all the cost of purifying the sewage.

3rd. S. Fulda's effluent was not satisfactory, and he did not fully reveal his process.

5th. R. Goodall proposed to purify the sewage at a cost of 7s. 6d. per million gallons for material, but it proved to be 4*l.* 6s. 6d. on the experimental tanks, but reduced to 53s. 4d. on the large works, where he experimented at his own request for some months. The Clarifying and Utilisation of Sewage Company, Limited, now represents this process.

9th. Bailes and Crowther's was not successful.

10th. Hanson's process as first used was not successful in discharging the colour when the sewage was impregnated with dye-water, but by subsequent experiments, and using a fresh ingredient which he calls hœmasite, he finds he can purify the sewage, at a cost for about twenty-two tons per day for ingredients, of 14s. 6d. per hour for the total daily flow of 12 to 14 million gallons, being about 29s. per million gallons, or 17*l.* 8s. per day, or 6,200*l.* a year. The A B C being about twenty-four tons, 18s. 3¾d. per hour, or 22*l.* 1s. per day, equal to 8,048*l.* a year.

Against the advantage of Hanson's reduced cost, there is no off-set for value of residuum, no price for it having yet been established; the inventor claims that it is of equal or greater value than the native guano.

To determine the value of the native guano as far as possible by actual experiments, quantities varying from half a ton to five tons were given to agriculturists, farmers, market gardeners, and others, on condition that reports should be furnished to the committee of the results obtained in each case. Sixty of such reports have been received up to this time, and of these forty are favourable, having been tried on grass, turnips, and other root crops and garden produce.

The values given vary from 7s. to 80s. per ton

carry out the work in that manner, and for this he was summoned three times by the Metropolitan Board of Works, who were eventually obliged to admit that he was right in stating that the work which was "packed" with large pieces of stone was stronger than that made with small pieces of material. As to the question of materials, he considered that burnt ballast was one of the best possible aggregates. In the first place it was very plentiful, and was stronger than gravel ballast. Next in order of value came "clinkers" from furnaces. The harder the ballast was burnt the better. One peculiarity of concrete made with this material was that a nail could be driven into it, and it could be cut in the same manner as Portland stone. It might also be cast in any form. Slag was also a very good material for concrete, provided that it contained sufficient breeze. He had made a floor of this material 19 ft. by 13 ft., without any iron joists. This was his first attempt in that direction, and was very successful, and he next made a floor, 40 ft. by 16 ft., also without iron. It was 4½ in. thick at the crown, and 11 in. thick at the springing, flat at the top. To the floor above he gave a springing of 18 in., but built 9 in. walls, and 6½ in. cross-walls upon it, and it still stood without crack or blemish. Some people went so far as to say that seven parts of ballast to one of cement was amply sufficient for all practical purposes, but he could not agree with them, as the proportions would vary according to the treatment.

Mr. C. F. Hayward remarked that, as there was still a considerable amount of doubt as to the strength of concrete, clerks of the works should be scrupulously exact in seeing that the terms of the specification were complied with. But while concrete building needed considerable looking after, so did all building.

Mr. Rowland Plumbe said that five years ago he built a terrace of model dwellings in concrete, consisting of seven houses, the front wall of which was continuous. The materials used were six of burnt ballast to one of Portland cement, and the result had been very satisfactory. The buildings were put up by one of the concrete patentees, and he had every reason to be satisfied with the result. He had lately seen the buildings, and they appeared to be quite free from cracks. During the course of the works he had made several experiments to test the strength of the material, and had found it impossible, by leaning his back against a wall, to kick a hole through a 2½-in. partition-wall, 10 ft. long and 6 ft. high. He thought, however, that concrete was not sufficiently impervious to make a dry house unless coated with plaster, and that being the case, the architectural treatment of concrete involved the question of the architectural treatment of plaster. Whenever plaster was used for facing concrete walls, it should be simply treated with incised lines or ornament, and should never be made to appear like stone. As to the relative cost of concrete and brick buildings, he had sometimes found, on inviting tenders, that instead of concrete buildings being ten per cent. cheaper than brick, the tenders were ten per cent. in excess of those sent in for ordinary materials.

Mr. Dawson pointed out that the concrete which had escaped unharmed in the fire at Sir Sydney Waterlow's buildings was made of breeze, a material which had already been burnt, and which was therefore incapable of being burnt again. It was important, therefore, in using concrete in buildings where fire was likely to occur, not to use materials which would be calcined by the heat.

Lord Elcho said he took a very great interest in the subject of concrete, particularly in reference to its capabilities for cottage-building; for cottages built with the ordinary materials cost from 15 per cent. to 20 per cent. more at the present day than they cost a few years ago. He had personally examined and tested a concrete bridge being erected by Mr. Brannon over the River Axe, Devonshire, for Sir Walter Trevelyan, and had been astonished at the resistance it offered to the impact of heavy weights. He had also examined the fireproof concrete doors of the King-street Galleries, and they were apparently the very thing required for our national picture-galleries and museums.

Major Seddon, R.E., said he had used concrete very largely for barracks, both for walls, floors, and roofs, and was thoroughly convinced of its constructive value. From his experience he did not think that contractors were desirous of "scamping" concrete work; they were rather disposed to be careful, for it was a material they were rather shy of unless they were professed concrete builders. When concrete buildings erected by general contractors failed it was generally from ignorance of the nature of the material, and not from wilful "scamping." Contractors were not alive to the necessity of the cement being fresh burned. He had made an experimental slab 14 ft. 6 in. square by 6 in. thick, and after twenty-one days' setting, it had been supported at the edges on brick walls and tested by eighty-four men marching, "doubling," and "doubling out of time,"—a very severe test,—over it, without any sign of failure being visible. This same block or slab had afterwards failed with 10½ tons of dead weight placed upon it in the centre, which, by mathematical calculation, he had ascertained to be about one ton more than the live load, so that had there been twelve more men engaged in the test the slab would probably have given way under them. As to iron, he preferred to use it outside his concrete, and not embedded in it, for it was impossible to tell what the iron was doing when it was hidden from view. This slab was composed of one of Portland cement and four of brick ballast, ganged to a 1-in. mesh, and kept well watered for seven days. He had another slab made, 6 in. thick, 14 ft. 6 in. long by 6 ft. 9 in. broad. This slab was subjected to the marching and "doubling" tests of forty-five men, which did not affect it; it was then loaded with dead weight in the centre, and when fifteen tons was upon it, or 3 cwt. per foot super., it began sensibly to bend. With thirty-two tons upon it, or 6·53 cwt. per foot super., it cracked slightly. It was then loaded up to 42½ tons, or 8·8 cwt. per foot super., but the cracks did not increase, for the compressive strength of the material came into play at this point, the outside edges of the slab being tilted up to the extent of ¾ in. This material made a perfectly impervious roof. He could not positively affirm that concrete had not a slight tendency to shrink, and therefore to crack; such a condition might be dependent upon some alteration of the form of the particles consequent on crystallisation.

On the motion of Mr. Roger Smith, seconded by Mr. Aitchison, the discussion was adjourned to Monday, the 29th inst.

NEW SEWAGE WORKS AT WIMBLEDON.

FOR some time past a plot of land, about fifty acres in extent, has been in course of preparation by the Wimbledon Local Board, for the purpose of disposing of and otherwise utilising the sewage within the parish, and the works are now almost completed, and will shortly be in operation. The sewage works are situated on the south side of the railway, lying between Wimbledon and the Tooting Cemetery, and immediately adjoining the ground upon which the new cemetery for Wimbledon is now in course of formation. The area of land which is intended to receive the sewage has been laid out in contour beds, each bed being supplied with a separate system of pipe-carriers, with a regulating valve to regulate an exact flow to such beds. In connexion with the filtration area, provision has been made for dealing with a large quantity of storm-water, and one filter-bed has been constructed upwards of an acre in extent, and composed entirely of burnt-clay ballast, and thoroughly underdrained. This filter-bed will be used only in times of storms. The system of dealing with the sewage is a combined chemical and intermittent filtration process, which is stated to be one entirely new and novel. Under this process the sewage in the first instance passes through chloride of magnesium lime, and after five hours' subsidence the water is conveyed upon the land along the pipe-carriers already named. On a small scale, it is said that this system of dealing with sewage has been in daily operation for the last five years, with satisfactory results, the consequence being, as we are informed, that many towns have recently adopted it, including Edmonton, Tottenham, Taunton, Aldershott, and several other places. The effluent water is stated to have been frequently analysed by the chemists attached to the Lea Conservancy, and other chemists, and its purity to have been such as to admit of its free entry into any running stream without fear of pollution. The author or inventor of the process is Mr. W. J. Rowell, the surveyor to the Wimbledon Local Board, under whose superintendence the works have been carried out, the contractors being Messrs. Neave & Son.

The engine-house and other buildings on the works, containing the machinery for dealing with and pumping the sewage, are neat and substantial structures. The engine-house forms the central portion of the main block, and is approached through a lofty Gothic doorway, the elevation being surmounted by a gable. The boiler-house and tank-house are on each side of the engine-house, and are likewise surmounted by gables. On the right and left of the central block are the engineer's residence and that of the keeper of the sewage farm, both being uniform in their external appearance with the first-named portions of the buildings. The materials used in the buildings are white brick, with red brick dressings and bands.

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This committee accordingly inspected every feasible plan which they heard was in operation at any place, including:—

1. *Worksop.*—Precipitation by lime system.
2. *Croydon.*—Irrigation.
3. *London.*—A portion irrigation at Lodge Farm, Barking; the rest pumped into the Thames.
4. *Hertford.*—Chloride of lime.
5. *Rugby.*—Irrigation.
6. *Bradford.*—Holden's process, lignites, clay, and lime. H. A. Bonnewell's patent.
7. *Harrogate.*—Irrigation.
8. *Leicester.*—Lime process.
9. *Birmingham.*—Subsiding tanks.
10. *Coventry.*—Filtration; not successful; then about to commence irrigation.
11. *Leamington.*—A B C process.
12. *Stroud.*—Sulphated clay.

This refers to 1869-70; since then, some of these places have adopted other modes, as,—

Hertford.—Phosphate sewage.

Birmingham.—The lime process, with manufacture of portion of the sludge into cement by General Scott's process.

Coventry.—Sulphate of alumina. Dr. Anderson's process.

Bradford.—Lime and filtration through coke.

Subsoil drainage and earth-closets had the attention of the committee, but were dismissed as not likely to meet their requirements; whilst for irrigation, the sewage would have to be pumped to a considerable height, or carried about twenty-five miles towards the Humber before sufficient suitable land could be obtained. The great outlay involved by either of these processes led the committee unanimously to the conclusion that some system of precipitation was the best adapted to the wants of Leeds. Of these, none appeared to offer the same advantages as that of the Native Guano Company, known as the A B C process, and although the report of the Rivers Pollution Commissioners of the 4th of July, 1870, was very unfavourable, the committee at that time knew of no other mode which offered any better prospect of success,—the company saying they could purify the sewage, and make the manure, at 2*l.* per ton, whilst the commissioners valued it at 32*s.* If this could be realised, the committee saw that the cost would in a large degree be covered, and they looked, by the help of further inventions and experience, to be able to reduce the cost, still keep up the value of the manure, and effect their great primary object, the purification of the sewage. These expectations have been more than realised; for if a market can be found for the manure at even 20*s.* per ton, the total cost of working on this system will be covered.

Eventually an agreement was made with the Native Guano Company, the Corporation undertaking to erect works to treat 2,000,000 gallons daily as an experiment, the company to work the process with a stipulated share of the proceeds.

This was done, and the company carried on the work at the experimental tank for a considerable time. The effluent water produced was watched with much interest, and analysed by Dr. Frankland and others. Dr. Frankland's report was that in this effluent the polluting power was "only slightly beyond the limits proposed by the Rivers Pollution Commissioners," and this standard, it is known, is very high. A fish lived and thrived in the effluent above three months, whilst another, similarly treated, and placed in a glass globe, but supplied with the town's water, died about two weeks before, thus proving to the committee, notwithstanding the Commissioners' report, that the A B C process would suffice for the purifying of the Leeds sewage, and that the effluent could be no nuisance to the inhabitants below Leeds.

After our experience with the trial tank, the committee resolved, whilst not binding themselves to the A B C, to construct works sufficient to deal with the entire flow of sewage (now between 12,000,000 and 14,000,000 gallons daily) by precipitation, such works being adapted for any precipitation process. These works have been constructed at a cost, including 25 acres of land, trial works, workmen's cottages, &c., of about 60,000*l.*

The Native Guano Company not being able, in the face of all the opposition they encountered (official, professional, and otherwise), to sell their manure, on which their success depended, were compelled to discontinue working the process, and terms were arranged between the company and the Corporation, annulling the contract between them.

The establishment of the value of the native guano being of vital importance to the company, they published numerous testimonials as to its value, but these failed to create a demand. The committee, to satisfy themselves as far as they could on this point, made trials on six half-acre plots in various dressings, the result showing an advantage of 9*s.* 1*d.* on the produce of hay for two seasons, on the plot, in favour of the native guano at 3*l.* 10*s.* per ton, the value claimed for it by the company, over Peruvian guano at 15*l.* per ton, whilst the quality of the hay was the best of any, though calculated all at the same price. (See two reports herewith.)

As the experimental tanks, &c., were at liberty during the construction of the permanent works, the committee advertised, inviting any one who had a better system to propose than the A B C, to test it at the trial tanks, and several responded to the request.

1st. General Scott—Purification by lime and manufacture of sludge into cement.
2nd. Councillor R. W. Moore, for a friend of his.
3rd. Silvester Fulda—Glauber's salt.
4th. Jackson & Watson, of Great Ayton.
5th. R. Goodall—Estimating cost of material, 7*s.* 6*d.* per million gallons.
6th. W. Prange, Liverpool — Whitthread's process.
7th. Phosphate Sewage Co.
8th. Waterson & Co.
9th. Bailes & Crowther, Armley, near Leeds.
10th. John Hanson, Dewsbury.

Of the 2nd, 4th, 6th, 7th, and 8th, it may be said the plans proposed were not tested, the promoters either not foreseeing a successful issue, or not being willing to bear the cost of a trial; and of the others, that they offered, in the opinion of the committee, no advantages over the A B C process.

1st. General Scott did not propose to do more than convert the residuum into cement without loss, the Corporation bearing all the cost of purifying the sewage.

3rd. S. Fulda's effluent was not satisfactory, and he did not fully reveal his process.

5th. R. Goodall proposed to purify the sewage at a cost of 7*s.* 6*d.* per million gallons for material, but it proved to be 4*l.* 6*s.* 6*d.* on the experimental tanks, but reduced to 53*s.* 4*d.* on the large works, where he experimented at his own request for some months. The Clarifying and Utilisation of Sewage Company, Limited, now represents this process.

9th. Bailes and Crowther's was not successful.

10th. Hanson's process as first used was not successful in discharging the colour when the sewage was impregnated with dye-water, but by subsequent experiments, and using a fresh ingredient which he calls hœmasite, he finds he can purify the sewage, at a cost for about twenty-two tons per day for ingredients, of 14*s.* 6*d.* per hour for the total daily flow of 12 to 14 million gallons, being about 29*s.* per million gallons, or 17*l.* 8*s.* per day, or 6,200*l.* a year. The A B C being about twenty-four tons, 18*s.* 3½*d.* per hour, or 22*l.* 1*s.* per day, equal to 8,048*l.* a year.

Against the advantage of Hanson's reduced cost, there is no off-set for value of residuum, no price for it having yet been established; the inventor claims that it is of equal or greater value than the native guano.

To determine the value of the native guano as far as possible by actual experiments, quantities varying from half a ton to five tons were given to agriculturists, farmers, market gardeners, and others, on condition that reports should be furnished to the committee of the results obtained in each case. Sixty of such reports have been received up to this time, and of these forty are favourable, having been tried on grass, turnips, and other root crops and garden produce.

The values given vary from 7*s.* to 80*s.* per ton

only nine give a money estimate; the average appears to be 37s. per ton. Twenty were unfavourable; tried on grain, grass, turnips, &c., but only in four cases on garden and general produce; the estimated value is from nothing to 27s. 6d. per ton.

From these returns it would appear that the native guano is best adapted for garden produce. Many of the farmers remark that the season was unfavourable, being too dry.

The position in which we stand in Leeds at the present time may be thus summarised:—

There is no difficulty in purifying sewage by precipitation, so as to render it admissible into a running stream, especially one like the river Aire, below Leeds, without causing a nuisance, or being injurious to public health; but this is done at a cost. Whether or not this cost can be covered, or a profit made by the sale of the residuum, remains to be seen. The best prospect we have of such return is from the A B C process. We have at present to choose between this and Hanson's; if his residuum is of equal value with the native guano, and will sell as readily, his would have the advantage; or, if the Native Guano Company can reduce the cost of their ingredients and working to that of Hanson's, they will have the preference, unless Hanson's residuum sells as well as that of the native guano: but if both can be reduced to the same cost, and have the same return for residuum, then the preference will be for that producing the best effluent, and if these be alike, the two processes will be of equal merit.

Although this may be taken as the position with us to-day, we are in hopes that further inventions and discoveries may be made, and that the vexed question of the profitable treatment of towns' sewage may, in the course of time, receive a successful solution.

Mr. Thompson then introduced the case of Leicester, with regard to which he said that the water-carriage system had entailed an average cost of from 1,500*l.* to 2,000*l.* a year. The system had been in operation for twenty-two years.

Mr. Rawlinson, C.B., chief engineer-inspector of the Local Government Board, was introduced at this stage of the meeting, and said he had been lately engaged in collecting the most recent information with regard to the different modes of dealing with sewage, and his preliminary report was then before the Local Government Board. He might state, broadly, that in his opinion the question of dealing with sewage had better, at the outset, not be considered as one of profit to the town, but as one of getting rid of that which was injurious to human life in the cheapest and most effectual manner. There were many places, in Lancashire and Yorkshire, for instance, where irrigation would be impracticable, for two reasons: firstly, the difficulty of obtaining land, and secondly, there was a great objection to depriving the district of its water. The manufacturing towns of the district were thickly studded all along the banks of the rivers, and it was a necessity for them that they should have water, dirty or clean,—and there were many manufacturing purposes for which dirty water could be used, although clean water would be preferable. How the rivers were to be cleansed was the great question which had to be solved, for it was quite clear that manufacturing industries could not be greatly extended if the present rate of pollution went on. The pollution was due to various causes, and any one who cared to read the reports of the Rivers Pollution Commissioners, and to look at the deductions which might be drawn from those reports, would see that proper regulations duly carried out in the manufacturing districts would very largely reduce the present amount of pollution, without injury to the interests of manufacturers. But he should tremble for the manufacturing industries of the country if rigid chemical standards of purity were to be set up, and manufacturers were told to produce an effluent of a particular degree of purity. In legislation, nothing more injurious could be done than to enact a law which could not be obeyed. On the other hand, the restrictions might be very stringent if they were confined to certain things. Our rivers were much abused, for instance, by the casting in of solids, and this practice was to a great extent responsible for the disastrous floods with which the country had been visited of late years, and entailing immense loss of property. Reverting to the subject of sewage, he knew of no mode by which a town could be pecuniarily benefited by dealing with its sewage, not even irrigation, when all the expenses were capitalised. But he thought it was unquestionable that where irrigation could be properly carried out it was the most economical manner of dealing with sewage. The alarm manifested by residents in the neighbourhood of sewage farms was totally groundless. Sewage farms need not be swamps, and it certainly was not true that their produce was unwholesome. Where land could not be had for irrigation, precipitation would be the cheapest and best method of dealing with the sewage; but by no possible process yet known could a town deal with its sewage at a profit. Chemists might declare that a particular sludge or deposit was worth so much per ton, chemically speaking; but its worth was to be measured by what it would fetch in the market. So far as he could see at present, towns must be content to clarify their sewage-water, and to pay for the cost of the process.

In a subsequent portion of the proceedings, Mr. Crookes, F.C.S., spoke on the chemical aspect of the question. He agreed with Mr. Rawlinson in deprecating the setting-up of an arbitrary standard of purity for efflcent water. The simple test he would impose would be, that everything which was thrown into a river should be better than the river at the point where it was thrown in. By this means the rivers would gradually become purified. The manufacturers and others up the stream would, of course, have to work to a higher standard of purity than those below, and in course of time the stream would become as pure below as it formerly was above.

Mr. R. Brewer spoke of what had been attempted at Richmond in regard to the disposal of sewage, and said it was high time that the Legislature interposed for the purpose of insisting on some general scheme being carried out for all the parishes in the Thames Valley.

Mr. Adam Scott said that, in view of the extent to which typhoid fever had prevailed in Edinburgh and Glasgow, an open and exhaustive inquiry into the question of "flushing" could not be too soon undertaken.

Sir Henry Cole maintained that every person who intended to occupy a house should insist upon having a certificate assuring him that the internal drains were in a proper condition.

The Conference was brought to a close on Thursday, the 11th inst.

REFORM IN THE ROYAL ACADEMY.

THE best friends of the Royal Academy, equally with its critics, must admit that thanks are due to Sir Charles Dilke for the clear, temperate, and able manner in which he laid before the House of Commons objections that have been urged against parts of the constitution of the Academy, and wishes that have been expressed for alterations and improvements. Further, all must desire that the information he sought to obtain should be forthwith made accessible. What Sir Charles Dilke moved for was, that an humble address be presented to her Majesty, praying that she will be graciously pleased to cause to be laid before Parliament a copy of a late report on the direction of the fine arts in France, made by M. Edouard Charton to the French Ministry of Public Instruction; and also praying that she will be graciously pleased to cause her representatives at the European Courts to report on the present attitude of the State towards the fine arts in the various countries of Europe.

The motion, after debate, was withdrawn, but we trust steps will be taken to bring it forward again, without that reference to the Academy which Sir Charles very usefully made, in which case the Government could scarcely refuse compliance. As to the changes and improvements which may be recommended to the Council of the Academy, we will make an opportunity to speak. An increase in the number of the Associates is in progress, but this step will be altogether unsatisfactory unless the number of Academicians be also made larger.

Proposed Market Hall for Holywell.—In consequence of an application to the Local Government Board, made by the Holywell Local Board, for sanction to borrow 5,000*l.* for the purpose of erecting a market-hall, Mr. Robert Morgan, C.E., has attended at the offices of the Local Board to hold an inquiry into the subject. Several members of the Board and ratepayers attended the inquiry, but no opposition was raised.

NEW PUBLIC HALLS.

Staindrop.—The Scarth Memorial Hall at Staindrop, near Darlington, was opened on the 18th ult. by Mr. J. W. Pease, M.P. The gentleman whose memory is perpetuated by the erection of this memorial, for many years occupied the position of head agent to his Grace the Duke of Cleveland, on whose Raby estate the village of Staindrop stands. The building has been erected from the designs of Messrs. Ross & Lamb, of Darlington. It is a substantial stone erection, and comprises a hall 57 ft. in length, 32 ft. in width, and 23 ft. in height, with gallery, platform, and vestibule, and is capable of accommodating about 400 persons. The ceiling of the hall is wagon-headed in shape, and formed into panels by the principal roof timbers, which are moulded and exposed to view. There is a cloak-room, on each side of the entrance, 10 ft. 3 in. long and 8 ft. 9 in. wide. Behind the hall is placed the club-room which is 25 ft. long, 12 ft. 6 in. wide, and 11 ft. 9 in. high, available as a retiring-room in connexion with the hall; and above that is the reading-room and library of similar dimensions. The hall will be used for concerts, lectures, social gatherings, Foresters' anniversaries, the Freemasons' Lodge, &c.

Tuebrook.—The "Derby Hall," erected by the Conservatives of Tuebrook, was opened on the 26th ult. It has been built from plans by Mr. John M'Fall, foreman to Messrs. R. Barker & Sons, builders, West Derby. The builders were Messrs. R. Barker & Sons, and their tender amounted to 1,750*l.* The style is described as "a modernised Doric." The front of the building in West Derby-road is in white Ruabon bricks, with redstone dressings. The ground-floor consists of entrance-hall, store-rooms, kitchen, &c., and rooms which are especially adapted for the requirements of Masonic meetings. There is also on this floor a front room, intended in the design for the Conservative Working Men's Association. The large hall, on the upper floor, is 21 ft. high, 75 ft. in length, and over 34 ft. wide. At the end of the hall, over the principal entrance, there is a gallery running from side to side, and there is also another smaller gallery or balcony at the other end over the platform.

Camberwell. — The Surrey Masonic Hall, Camberwell New-road (which has been already described in the *Builder*), was consecrated to Masonry in July, 1875, but it was only on the 18th ult. that the main portion of the building was completed, including a hall 95 ft. long, 40 ft. wide, and 35 ft. high, in which great gatherings of the Craft can at all times take place, although when not so engaged it can be used for other purposes. Mr. E. Clark is the architect, and Mr. John Oliver the builder.

Horfield (Bristol).—At a meeting held at Horfield, on the 27th ult., to consider the steps to be taken for the erection of a public hall within the parish, Mr. Kent presented the report of the committee, which stated the original tender for the proposed hall was 3,999*l.* The committee felt great difficulty would be experienced in obtaining so large a sum, and consequently they had modified the plans and obtained an amended tender, which amounted to the sum of 2,460*l.* The original size of the hall would not be interfered with, and there would be two waiting-rooms, 24 ft. by 24 ft., which, at any time, could be thrown into one. The portions of the original scheme which the committee had decided to omit were the shop and dwelling-house, together with the suite of offices.

Reading.—For some years past the working population of the east end of the town of Reading has been very rapidly increasing, and, till recently, no attempt has been made to provide a suitable lecture-hall or reading-room. A short time ago, however, the Victoria Hall Company was formed, with a capital of 3,000*l.*, in 600 shares of 5*l.* each. A site has been obtained opposite Victoria-square, and near King's-road, on which it is proposed to build a hall to seat 400 to 500 persons, and which may be used for concerts, lectures, &c., a large club-room, and a suite of class or committee rooms, and a manager's residence.

Appointment of Inspector of Nuisances for Warwick.—At the meeting of the Rural Sanitary Authority of the Warwick Union, held on the 6th inst., Mr. Trepass was appointed inspector of nuisances. The salary is 200*l.* per annum, which includes travelling expenses, and the appointment is for three years. The inspector has to prepare any plans which the Authority may direct.

SOME OLD HOUSES AND THEIR STORIES.

THE HOUSE IN WHICH JOHN SELDEN WAS BORN.

WE go back to the year 1584. Raleigh had newly discovered Virginia; the Jesuits were darkly plotting all over Europe to restore England to Popery, and dethrone "good Queen Bess"; Elizabeth had made the mere presence of Romish priests in England high treason, and the concealing, aiding, or abetting of them felony.

It was the time of a sternly paternal government, when the law multiplied crimes with wonderful facility, and caused felons to abound in the land. Twelve persons assembling to discuss politics or religion, with a view to change, thereby became felons; and any one person subscribing to any fund being raised for such political or religious purposes, in any way, became a felon too. The wives, sons, or daughters of men who assembled for these purposes were accounted felons, if they voluntarily sent them even food. It was felony if, seeing any such meeting, you failed to let the proper authorities know thereof. It was felony to repeat rumours affecting the reputations of great people, or, in other words, to be "horrible false messengers of prelates, dukes, earls, and other noble personages, or great officers of State," to say nothing of "her Sovereign Lady the Queen." The working-man's wages were regulated by law, and it was felony to endeavour to alter or refuse to accept them. The law regulated the kind of clothing he was to wear, and would not permit his employer under any circumstance to give his workmen higher wages than were allotted them by law. The law allowed no labourer to move from one locality to another without a magistrate's permission; and it punished even the tailors if they made to order "any guards, welts, or great ruffles, upon any coat, doublet, jerkin, hosen, or any other apparel made for any servant at husbandry, day labourer, journeyman, or 'prentice." The law punished those who did not attend the Established Church regularly, or did not conduct themselves with the strictest propriety when in church, and in many other ways thrust its meddlesome fingers into everybody's private pie, until it became hateful, a pest and a nuisance, keeping the public mind in a constant state of fretfulness, uncertainty, dread, and irritation, boding ill for some future time, which was even then with shuddering dread foreseen and warningly spoken of.

Mr. Tyldsley, of Burnham, in a letter preserved in the Public Record Office, addressed to Mr. Secretary Cecil, who was afterwards Lord Burleigh, says:—"I do not see any man earnestly bent to put the laws in execution. But every man letteth them slip and pass forth. . . . . And this one thing be you most sure of, that as much evil as can be invented by the devilish wit of them that be naught is spoken and murmured against you"; and he goes on to speak of those who attributed these vexatious laws to the influence of the great all-powerfnl Mr. Secretary Cecil, adding "I do know all this to be true, for I do hear it among their servants, and belike they have heard it from their masters at one time or another. And further," adds he, "when I was last at London, there was then a business in hand touching what wages watermen should take, going from one place to another, which thing was much cried out upon. And they said Mr. Cecil was the doer of all that matter too; therefore, for God's sake, sir, be you ware."

Mr. Tyldsley forcibly illustrates what he had keenly observed beneath the seeming surface of prosperity and content, despite the forcible suppression of public opinion, by the following story:—

"Four days have not yet passed since one of my men said to me, putting on a bold face the while, 'Sir, would to God ye would not meddle so much as ye do, nor be so earnest, for,' said he, 'if ye heard so much as I do hear, ye would marvel, for even they that do speak you most fairest, and flatter you to your face, do name you behind your back, to be a cruel and extreme man, with a great deal more that I shall not rehearse. And they say,' said he, 'that all these doings is along of Mr. Secretary Cecil.'"

Lastly, Mr. Tyldsley prays Cecil, this nominal secretary, who in secret was all but a king, to bear with his over-boldness in mentioning such things, and to be "most sure that he had not written his letter without the sorrow of his heart and the tears of his eyes."

If that thoughtful, observant, far-seeing man could only have looked forward as clearly and surely as we can now look backward, it would indeed have deepened the sorrow of his heart, embittered the tears of his eyes, made him far more desperately earnest than he was in imploringly warning the great legislator of his day against "cruel and extreme" laws,—against laws which were well meaning enough in their intentions, but fell into the mistake (not altogether unknown even in these enlightened days) of regarding grown-up men and women as if they were infants in the nursery unable to feed, clothe, or even properly amuse themselves, and prone to fall if left to run alone.

The little cloud Tyldsley's letter speaks of, arising in the deceitful calm of those prosperous times, was seen by the old house of our present sketch which still stands at Salvington, in Sussex, near West Tarring and Worthing, where it is known as the Lacies.

Within its humble walls in the wintry cold of a December night or day—the sixteenth—in the said year, 1584, was born one who was to witness the spreading abroad of that cloud and the bursting forth of a terrible storm thus brooding dark and silent in its small beginnings. When the whole surface of the land was to be converted into one vast battle-field deluged with blood, and every town and city and village were to be full of ruined homes, helpless widows, starving orphans, and blighted fortunes, he, in the strength of a gigantic intellect, and the generous self-devotion of a noble nature, was to aid greatly in preserving this desolated country from utter destruction. To earn the heart-felt thanks of an admiring posterity,—who never cared to ascertain and have now quite forgotten who their benefactor's father was.

There is a tradition which tells us that this father of one whom no less a man than Grotius of Delft called "the glory of England," in other words, John Selden, was a wandering fiddler. It may have been so. In those days the glory of the old wandering scholars and minstrels had departed, but they were still immensely popular and well paid. They were by law "vagrom men," in constant terror of the stocks and the whipping-post, who visited alehouses and fairs, where, to mean, common people, they fiddled and sang songs concerning Clym of the Clough, Robin Hood, Little John, Friar Tuck, and Randle, Earl of Chester, "Scarlock, George-a-Green, and Mutch the Miller's Son," or matters more pregnant with current interest and dangerous. They were, apart from the law, "roaring boys" who brought news when news was scarce, and whispered secret stories of evil doings in high places, and were much praised, petted, and protected by the populace generally. Even the great secretary Cecil sometimes patronised them, and one Mat Nash,—great in a famous ballad called "Hunt's Up,"—he rewarded so liberally that the wanderer was enabled to settle down in a house of his own, a retired and comparatively prosperous gentleman, with no more fear of the scourge than Shakspeare then had. This Mat Nash was once imprisoned with another of his tribe, Delone, a bold vagrant who had impiously dared to compose a song reflecting in a time of famine upon the Queen's Government and laws, which Nash as wickedly had dared to sing. Delone boldly defied the lion even in his den, and probably suffered fearfully in purse and person, but Nash was penitent, and, aided by Cecil, escaped with a reprimand.

These wandering fiddlers were men of no small consequence. In the reign of James I. we find some of them were prosecuted for singing songs reflecting on the unpopular Duke of Buckingham,—he who employed English ships against the hapless Huguenots, and was proud of his actions when he ruined a friend or seduced a woman. The judges dared not read the ballads in court "lest the scandals should spread"; but they had copies made for every lord and judge who was present, and the Attorney-general, instead of reading the obnoxious verses aloud, merely repeated the first and final lines of each to identify them, handing his copy after doing so to the fiddlers at the bar that they might also identify them. The fiddlers were fined 200*l.*, and, in addition, were sentenced to stand in the pillory, and to be afterwards whipped. So singularly covert and unsatisfactory a way of conducting a public trial created general discontent amongst the people, and was sure to attract the attention of a patriotic lawyer like John Selden, who, if he were indeed the son of a fiddler, doubtless took special interest in and long preserved in memory a law case so singular and significant as that of "The Fiddlers of Staines."

John Selden was five years old when the great Spanish invasion ended in the destruction of the "Invincible Armada." At an early age he was sent to the West-street Grammar School, in the ancient Saxon town of Chichester, where he saw Bishop Seffrid's fine cathedral, and probably heard many stories of its distinguished bishops; of Wareham and the great Charter King John signed at Runnymede; of Reginald Pecocke, the early Welsh reformer; of the renowned statesmen, Moleyns and Arundel; of Patrick, the commentator; Maltby, the critic; and others famous for learning, patriotism, or piety. Chichester, then famous for its malt and its needles, was rich in stories of natives who had done bravely or wisely, or suffered heroically for their creed or country; and Selden wandering as a boy under the lofty elm-trees which then stood in rows within its old stone walls, and overshadowed nearly the whole place, probably meditated on these things, which may have had much to do with the bent of his mind and the formation of his character. A flourishing and ancient city, famous in trade, standing in the midst of a fruitful and opulent country, sheltered on the north by a long ridge of adjoining hills, with the English Channel on its south and the Isle of Wight in the distance, Chichester was a pleasant, picturesque, healthy, and deeply interesting place to live in, and it must have been with deep feelings of regret that any one with Selden's tastes and feelings quitted such a locality as he did to complete his education and prepare to study law at Oxford.

It is said that he went to Hart Hall, then an ancient hostel, afterwards known as Hartford and Hertford,—which was not converted into a college until September, 1740,—and became a scholar of the university. There, as at Chichester, he must have heard much in praise of Bishop Pecocke, in connexion with one Vincent Clement, whom Anthony à Wood calls "an insolent doctor of Oxford," and whom the learned doctors and students of the Mendicant order (chiefly found in Oxford) abused far and wide as a pestilent, devilish heretic and pagan. But times had changed since then, and Selden heard Pecocke lauded even there, where a grand procession of the whole university, with the chancellor (Thomas Chandler) to head it, had witnessed the burning of Bishop Pecocke's books at Quatrevois.

Learning was not yet held in high esteem, and the university scholars with whom Selden found companions, friends, and associates, were mostly so poor that, like homeless vagrants, wandering fiddlers, pedlars, and such like personages, they were glad to receive the usual licence to go about begging for food. We read how they wandered out in threes and fours, singing doleful appeals to the charitable in much the same way as frozen-out gardeners now sing, and others who are "all the way from Manchester" and "have got no work to do-o-o." It was with reference to this their well-known and ancient custom, that Sir Thomas More, ex-Chancellor of the Exchequer, said to his children, when poverty stared him in the face, if New Inn failed to shelter them, "then," said he, "we will next year descend to Oxford fare, wherewith many great, learned, and ancient fathers be continually conversant, which if our power stretch not to maintain neither, then may we, like poor scholars of Oxford, go a-begging with our bags and wallets, and sing 'Salve Regina!' at rich men's doors."

Selden, probably, often went a begging with the rest, and doubtless he also took part of one kind or another with the turbulent riots and quarrels between the students of medicine and those of law which often led to bloodshed, and affrighted the city from its propriety. These were old enemies in the university, and fought bitterly, as did also the southern with the northern scholars, in one of which contests the principal of Hart Hall's predecessor had lost his life. The beggars, indeed, were rather given to fighting as an exciting amusement, and pretexts or excuses for it were, therefore, easily discovered. Selden left Oxford early in the seventeenth century, and came to London, living in chambers belonging to Clifford's Inn, from whence he was afterwards removed to the Temple. He was a devoted and most hard-working student. In 1610 he published his "Jani Anglorum Facies Altera," and in 1612 appeared the result of his friendship with Shakspeare's friend, Michael Drayton, in the shape of notes and illustrations on the first eighteen songs of the "Polyolbion." In the following year his verses in Greek, Latin, and English upon Brown's "Britannia's Pastorals" appeared, and won him a place in Sir John Suckling's "Session of the Poets." In 1614 his

"Titles of Honour" appeared, which Bishop Nicholson, as we may suggest to our present Prime Minister, describes as a work which "ought to be first perused, for the gaining a general notion of the distinction of a degree from an *emperor* down to a country gentleman." In 1616 he published "Notes on Fortescue's 'De Laudibus Legum Angliæ,'" and so year after year he went on producing great literary works until his "History of Tithes" roused the anger of the clergy, through them that of King James I., and so brought him before the Privy Council. This occurred in the year which saw Sir Francis Bacon made Lord Chancellor, great religious troubles arising in Scotland and Ireland, and the publication of that famous royal Book of Sports, whence also troubles arose. It was the year, moreover, in which a barrister of the Middle Temple, Mr. Williams, was cruelly done to death at Charing-cross, for writing a book which gave the King offence. Selden—a young man on the threshold of life—consented to express sorrow for the offence he had given to the clergy, but he refused to withdraw any of his charges against them. He still held that they were ignorant, lazy, and had no better titles to respect and reverence than those they derived from their beards, their titles, and their costumes.

The third Parliament of King James was that which originated parties of Court and Chancery, and first licensed public-houses. It was a sternly severe one, determined to vindicate the majesty of law. It convicted even the great Lord Chancellor Bacon, Viscount of St. Alban's, of accepting bribes from suitors in his own court, and it condemned him to pay a fine of 40,000*l.*; to be imprisoned during the king's pleasure; to be incapable of holding any office, or of sitting in Parliament; and never to come within the verge of the Court. This was alarming in many quarters wherein official corruption was destroying all regard or hope for honesty and justice. Selden, although not a member of this Parliament, had been sent for to advise and consult with it, and his counsel had much to do with the striking of so terrible a blow. The king resolved to check such doings. War commenced. Displeased with the justice-loving, law-upholding M.P.s, who claimed liberty of speech as their undoubted right, James accused several of them, on mere suspicion, of opposing the royal measures. They were sent to prison: some to the Tower, some to the Fleet, and with them Mr. Selden. But the king, some few weeks after, thought it wise to release them. Then, for the first time since the Reformation, Lords and Commons united to oppose the royal will, which, says Hallam, "must be reckoned an evident sign of the change that was at work in the spirit of the nation, and by which no rank could be wholly unaffected. . . . The struggle which was to be fought out in the battle-field, twenty years afterwards, had already begun . . . ; it was a contest for first principles,—whether England should be a constitutional monarchy or a despotism."

From this time we find Mr. Selden vigorously opposing the royal aims at despotic government, determined that no tax should be levied but by consent of Parliament, no man imprisoned but by legal process, &c. In March, 1629, when Charles I. reigned, he was again sent to prison. The Parliament of which Selden was a member was dissolved by the king, who issued a proclamation, wherein he declared that he should account it presumption in any who dared to prescribe to their king the time for calling another. Selden was offered his release on bail if he would repent of his "undutiful" conduct and promise to be a good child, and do in future as he was told. He, in common with his brethren in misfortune, were men. They refused, and were recommitted to prison, there to remain during their monarch's pleasure.

But we cannot follow incidents marking the career of a man whose memory this old house helps to freshen and preserve. Space forbids, although it is good to think of such men and what they did for us; to remember, especially in the face of any unconstitutional doings, that what they suffered and fought for it is our duty to guard jealously, uphold fearlessly, and hand down to our children, if not improved, undeteriorated.

In the wild, turbulent, whirlwind times of strife and civil war which followed when fanatical zeal degenerated into unreasoning savageness and cruelty, John Selden became wonderfully conspicuous. He was almost the only man whose passions were under the control of his reason. Both his friends and his foes admitted this. He fought for the right unmixed with wrong, and denounced the latter, however intimately it was associated with the former. With him wrong was wrong, although right had part with it, and he upheld the latter, prudently or imprudently, at the risk of being charged with supporting the former. Some thought he wavered; many accused him of half-heartedness and cowardice, charges which are revived against him to this hour. They were wrong; he merely loved justice for good's sake and God's; fearless of persecution and misrepresentation, he strove with dignity and calmness, firm, resolute, and brave, to support the right, independent of party and wherever he found it.

Calmly dispassionate, even where his feelings were most strongly worked upon, the intellect and science of the scholar, and the love of law for right's dear sake, always preserved him pure from the excesses of his friends. Hence they regarded him suspiciously, hence he failed as a man to secure their thorough sympathies. Therefore we know so little about John Selden's private life, and apart from the "Table-talk" of his grateful amanuensis, so little of his private character.

Yet Selden had many intimate personal friends, of which Camden, Spelmen, Sir Robert Cotton, Drayton, and rare Ben Jonson, who called him "the monarch of letters," were some, together with Butler, the author of "Hudibras," and many other men, the most learned and lofty of their age. Amongst even these many were puzzled to account for his impartiality. The celebrated Oriental scholar, Thomas Hyde, used to say that he valued nothing higher than the friendship of Mr. Selden, which he was proud to admit he had enjoyed even from his younger days, and that his, Selden's, society was always a delight to him. But he condemns, as "wickedness," his staying in London and sitting in Parliament after the rebellion had broken out. He strove to excuse it on the ground that even the best men have infirmities, and John Selden's were fear and love of safety (!)—faults which he fondly but foolishly argued "were weighed down with wonderful and prodigious abilities and excellences in the other scale." Another Hyde, Edward the great Lord Clarendon, spoke of his old foe with enthusiastic admiration, noting his learning as "stupendous," and saying of his character that it was one which it was impossible to flatter, confessing that to "transmit any expression equal to his merit and virtue" was an impossibility.

But we really must conclude. The reader will ere this have observed that our subjects are apt to run away with us. We go back to Salvington for another parting glance at the old house. There is no record of Selden's having re-visited it after going to Oxford in 1598. The front of the house has been rebuilt, but the gable end towards the road through the village is still as it was when the fiddler's son first saw it, and is a fair specimen of the domestic architecture of the sixteenth century. The lower room is one of goodly size, but very low, and over its doorway is a famous lintel-stone on which appears a Latin distich, said to have been composed and carved by Selden when he was ten years of age. It runs thus:—

"Gratus, honeste, mihi, non claudar isto sedebis,
Fur abeas, non sum facta soluta tibi."

Selden loved liberty, his country, art, and nature, and it was said of one of his works, written in explanation of the Arundelian marbles: "Should mankind refuse the praise due to Selden the stones would speak for him." He died on the 30th of November, 1654, when he had nearly completed his seventieth year.

The Birthplace of Selden, Salvington, Sussex.

PULPIT, ST. MARY'S CHURCH, SEYMOUR-STREET, EUSTON-SQUARE.

THIS pulpit is executed in Caen stone, with polished Devonshire marble shafts at the angles, and the shaft of the lower portion is of polished Cumberland alabaster. The niches are filled in with figures executed in Derbyshire alabaster, the centre contains Our Lord Jesus Christ as the Good Shepherd, and on either side the four Evangelists. The stairs are of oak, with metal-work by Messrs. Jones & Willis. The pulpit was executed by Mr. Underwood, sculptor, of Camden-town; and the architect was Mr. James K. Colling.

The church has also been fitted up with new open benches in pitch pine, a reading-desk of oak, and a reredos in Caen stone with marble inlay. The walls also have been decorated by painting; two of the side windows have been altered, and quatrefoil tracery added in the heads, and the windows filled in with tinted glass in Geometrical patterns. These are intended to be continued throughout as soon as the necessary funds can be obtained.

New Police Courts at Leigh.—The new police-courts for the Leigh petty sessional division of the county were used for the first time on the 1st instant. The buildings, which are situate in Church-street, include a residence for the superintendent of police for the Warrington division of the county of Lancaster, and have cost 5,000*l.* The architects were Messrs. F. & G. Holmes, of Liverpool, and the contractors Messrs. Boardman, of Leigh.

PULPIT, ST. MARY'S CHURCH, SEYMOUR STREET, EUSTON SQUARE.

THE GREAT DOLWILYM CROMLECH, CARMARTHEN, WALES.

INTERIOR OF THE PROPOSED CHURCH OF THE SACRED HEART, MONTMARTRE, PARIS: LOOKING TOWARDS THE SANCTUARY.—DESIGNED BY M. ABADIE, ARCHITECT.

THE GREAT DOLWILYM CROMLECH.

DURING the Carmarthen meeting of the Cambrian Archæological Association, a visit was paid to Llanboidy, to inspect the magnificent cromlech here illustrated. Till now no view of this grand prehistoric structure has been published that in any way does justice to the grandeur of its aspect. A very small cut is given in "The Families of Wales," and it is also illustrated in one of the volumes of the "Archæologia Cambrensis," but to a small scale, and not from the point of view chosen by us. Although Dolwilym is one of the most perfect and interesting cromlechs in Wales, yet, strange to say, it is one of the least known, and, as far as we are aware, nothing has been written of any moment regarding it, further than what has been given by the Rev. E. L. Barnwell, in his paper "On South Wales Cromlechs," in the "Archæologia Cambrensis." Our illustration is positively exact, and is a precise reproduction by Mr. Worthington G. Smith, from a careful camera-lucida drawing made last autumn. The Dolwilym Cromlech stands on a steep side of the bank of the deep and narrow valley of the river Tâf, on the grounds of Mr. Protheroe, at the northern extremity of the parish of Llanboidy, in Carmarthenshire. Originally it consisted of five, or rather six, stones, although only four now remain. The fifth, missing, would, if present, fill up the void at the south-west angle in front of the picture; and in all probability, says Mr. Barnwell, there was a second small stone at the eastern end, as the one now there could not, from its shortness, have closed that entrance. The tallest upright stone is 4 ft. 4 in. high, and the gigantic cap-stone measures 11 ft. 6 in. by 8 ft. 10 in. The inner sides of the upright stones are smooth and regular, while the lower face of the cap-stone, contrary to the more usual practice, is extremely rough and rugged. There are several scattered stones, some of great size, in the immediate neighbourhood of the cromlech, and these latter appear to form broken circles of large diameter, the dolmen being erected in the centre. Dolwilym has two recognised names, one of which is Bwrdd Arthur (Arthur's Table,—there is hardly a monument of the kind that is not assigned to Arthur), and the other Gwal y Vilast (the Couch of the Greyhound Bitch). Of this animal there are many records scattered over Wales.

When the chambers formed by the upright stones of cromlechs are examined for the first time, unquestionable evidence of burial is invariably found; it may therefore reasonably be inferred that as all cromlechs are so much alike in general design they have all been constructed over places of burial. It is also generally supposed that the interstices of the stones were originally filled up with rubble-work, and the whole structure covered with a mound of earth. The labour of erecting some of the dolmens found in this country must have been immense, and the honours of cromlech burial must have been extended to a very limited class, a class belonging to a past time so remote that, as far as present knowledge goes, no date can be assigned to it.

THE INTENDED CHURCH ON MONTMARTRE.

WE give in our present number an interior view of the proposed church of the "Sacré-Cœur," now being built on the summit of the hill of Montmartre, and which was some little time ago the subject of a large competition of architects, into which one or two English architects adventured themselves rather spiritedly than wisely. We published, at the time of the competition, a page of small exterior perspective views of some of the principal designs submitted, including the selected one, which is by M. Abadie.

The style of the selected design might be described as founded on the North Italian or Lombard Gothic, with modern French treatment of some of the detail, and not without reminiscences in the exterior design of Byzantine feeling. The project of erecting an important church on this site is an old one, but has been interrupted by the vicissitudes which have befallen Paris. The associations of the site are various enough, and little in keeping with those which generally cluster round a place selected for an important sacred edifice. Montmartre has been in part a place of amusement; an observatory tower of gimcrack construction, rejoicing in the name of the "Tour de Solférino," together with its refreshment buffets and beer-shops, is among the objects which "achieve to disappear," in order to make way for the great new building. On part of the plateau which forms a natural pedestal for the church at the top of the eminence, there was stationed during the siege an apparatus for the production of electric light to guide the troops on the occasion of sorties. It was in the garden of a cottage situated on this site that the double murder of Generals Thomas and Lecomte was perpetrated, and the place and memorials of which deed are also happily obliterated by the re-arrangement of the ground in connexion with the new structure. Other far more ancient and perhaps less authentic tragedies and martyrdoms have marked the spot. It was here, according to tradition, that St. Denis, apostle of France and Bishop of Paris, was beheaded along with his companions, St. Eleuthère and St. Rustique, whose names are preserved in those of two streets a little further from the site, on the slope of Menilmontant. "It were to be wished," says a pious French contemporary, in speaking of the projected work, "that these names should be now given to the two main streets which will lead to the future basilica,"—"*On réalisera ainsi par un symbole vivant la doctrine de l'Église, que nous arrivons à Dieu par l'entremise des saints.*" Indeed, the question of the site for this church seems to have considerably exercised the ecclesiastical French mind, as a matter of sentiment and association. Another proposition, entertained for some time was, that it should be built on the site of the great International Exposition held under the late Emperor, in order that Paris might kneel and worship on the same ground on which she had formerly taken pleasure in the display of her riches and splendour. And truly, though the idea be somewhat simple and old-fashioned, there is a certain fitness in it. Certainly, Paris might have been supposed to owe a penance, if ever a city did, for those days of thoughtless and unprincipled splendour; and bitterly enough she has paid it.

However, Montmartre is the site finally fixed upon, and the building is commenced; and, considering it from an architectural point of view, it will probably be as fine and effective a position as any architect could desire for an important edifice; and it seems probable that in regard to its general external contour and composition, the building will not be unworthy of the situation. The exterior design, in fact, shows a good deal of originality and of picturesque as well as architectural character. Some fear was entertained lest the site should have been undermined by old quarries or other former disturbances of the ground, but no difficulty of the kind has been encountered, and the new church on Montmartre reposes, at least, on a secure material foundation. What may be the ultimate fate or destination of the building amid the continual "settlements" of the moral and social foundations in France, it is less easy to conjecture.

The project seems to have excited a good deal of public interest, as may be surmised from the fact that more than 2,000,000 of francs (80,000*l.*) have been raised by subscription for the work.

MOVEMENT IN INDIA.

THE obstreperous surf of Madras is already beginning to show its effects on the new harbour works, and the papers received by last mail record that one night recently a portion of the newly-made groyne was completely washed away, the stones being scattered by the waves to a great distance. To prevent the recurrence of such an accident, the work of reconstruction is now being carried on without intermission day and night, and an incessant stream of stones is being poured into the sea. Much sand has already silted into the sheltered recess made by the shore end of the breakwater; but the engineers consider that when the current changes (and the currents annually do) this will be eaten out again.

It has been decided to extend the cotton manufacture to Mooltan, and a company has been formed which is about to erect large spinning-mills and other works there.

The piece-work question has extended to India, and some of the railway companies are declining to enter into new contracts with their time-expired men; but offer them enough to do if they will only work on the reasonable persistence for a fair wage. The artisans will have no cause to complain if plenty of work is provided for them, and may defy the competition of any number of natives or Eurasians who may enter the lists against them. European skill and energy will always tell on behalf of those who are willing to work, and the sooner India is rid of the loafers who have been discharged from railway and other works, and who now gain a livelihood by sponging on their compatriots, the better. If there is work to do, and these gentry will not do it, there will no longer be the same excuse for treating them with consideration, but the law may be enforced against them, and they may be shipped off to their own country.

The Duke of Buckingham having left Madras for Ootacamund, vigorous efforts were being made to complete the new Council Chamber for use during the protracted stay of the Government among the hills. The new building, which contrasts very favourably with the old one and is adjacent to it, has been designed by Capt. J. L. L. Morant, the executive engineer of the district. The actual council-room is said to be a handsome apartment, and the edifice has some pretensions to architectural effect, being surrounded by graceful verandahs and decorated with a clock tower. Waiting and luncheon rooms are provided, as are also apartments for clerks, peons, and other attendants on duty; and the entrance is so arranged that carriages deliver their passengers under shelter, which is a great advantage in such a climate.

It has been finally decided that the memorial of Lord Northbrook, the late Viceroy, shall be in the form of a statue. It is proposed that the memorial to the late Bishop Milman shall be the establishment of a bishopric at Lahore, the necessary endowment being raised by public subscription. The sub-division of the diocese, and the formation of such a bishopric, were objects which Dr. Milman had at heart; he succumbed to overwork, and the Punjab was the scene of his last labours; therefore the project will probably commend itself to his friends and admirers both in India and England. A large sum has been raised for a memorial of the late Mr. Thwaites, principal of the Hughli College. In this instance, also, two birds are to be killed with one stone, and a scholarship is preferred to an effigy.

The Calcutta Fine Arts School has been opened under the auspices of Sir Richard Temple, Lieutenant-Governor of Bengal. It is hoped that this is but a beginning, and that affiliated institutions will shortly be set on foot in many of the large Indian cities, as there seems to be a growing desire to cultivate art work.

The Chutteesguhr State Railway, which is now being rapidly pushed on to completion, will connect Rajpore with Nagpore, and it is believed the line will eventually be extended to Calcutta *vid* Sambulpore,—at least, such is the present anticipation. If the extension were carried out Calcutta would be brought 450 miles nearer Bombay than by the present route *vid* Allahabad.

The natives of Orissa have added another deity to the Hindoo Pantheon, in the person of the Coal God. A mine having been discovered in one of the tributary states, the simple inhabitants have been more than amazed at seeing the black-stones on fire, and have, without hesitation, attributed their inflammability to supernatural agency. Consequently, we are told that milk, cakes, and clarified butter, are thrown in large quantities into the den of the subterranean deity to ward off his malevolence. If the miners are at all shrewd, they ought to be able to put a stop to this throwing process, and see to it that the gifts to the altar are presented in more seemly form.

Mr. Rice, the director of Public Instruction in Mysore, has recently been engaged in studying some inscriptions carved on recently-discovered metallic plates which set forth a grant of land to some Brahmins in that district and incidentally mention the "Sarpayaga," or great sacrifice to root out the serpent race from India as having taken place 3,000 B.C., a date much more remote than has ever yet been assigned to it, and which would upset the chronology of the Hindoo mythology altogether.

It is intended to pay far more attention than hitherto has been paid to the valuable sandal-wood plantations of the Government, both in Madras and British Burmah, and officers have been appointed to investigate their condition thoroughly, and convert them into more profitable sources of public revenue. Orders have been issued to discontinue the practice of accepting tenders, and to sell out-wood by auction,—a combination having been discovered among the sandal-wood traders.

The Ahmedabad College Scheme has proved a failure for want of funds, and its promoters recently applied to Sir Madhava Rao to help them to make up the deficit. The Prime Minister

of the young Gaekwar, it is said, expressed his willingness to do so if the site of the building were transferred from Ahmedabad to Baroda, but it has not yet been determined as to whether his offer shall be accepted or refused.

During the year the greatest activity will be shown in completing the Indus Valley Railway, for which a grant has been made of 100,000*l*. As soon as the railway is finished the connexion of Scinde with Bombay will be served, and the province will be added to the Punjaub.

Last month, Colonel Willoughby Osborne, at the request of the Begum, laid the foundation of a free hospital in the city of Bhopal, in commemoration of the visit of the Prince of Wales to India. The site is said to be an excellent one, healthy and convenient, and the building is to be a two-storied one, one wing being devoted to the reception of males and the other of females. Its estimated cost is about 3,000*l*., and the Begum has expressed her intention of having a duly-qualified lady doctor at the head of the female department. In Bhopal, which is admirably administered, the females of the family rule. The ceremony was witnessed by Sadik Noosain, the husband of the Begum, and the principal nobles.

It is likely that an exhibition of Kattywar arts and manufactures will be opened in December next. The native chiefs not only sympathise with the scheme and are urging its importance on their people, but are themselves subscribing liberally in order to render it successful.

The chiefs of the Punjaub have commissioned Mr. J. Adams Acton, of Bombay, to execute a bust or a statue of Lord Napier of Magdala, according to the amount which may hereafter be subscribed.

The Government of India have desired the Chief Commissioner of Mysore to adopt such steps as he may deem expedient in preparing a list of objects possessing antiquarian interest in the province of Mysore and Coorg, and the work has been assigned to Mr. B. L. Rice, director of Public Instruction.

THE NEW LAW COURTS.

VISIT OF THE ARCHITECTURAL ASSOCIATION.

ON Saturday afternoon last the members of the Architectural Association mustered in strong force at the works of the new Law Courts, which are now sufficiently advanced to be of interest to the visitor. The architect, Mr. G. E. Street, R.A., was present, and was at some pains to thoroughly explain the plans, after which he accompanied the members over the works. As will be known to most of our readers, the works have been in hand for a little more than two years, the contractors, Messrs. Bull, of Southhampton, having, in February, 1874, signed a contract whereby they undertook to complete the works in six years and a half for 680,000*l*., the concrete foundations having previously been laid by Messrs. Dove Brothers. One stipulation of the contract is that the eastern block of office buildings shall be completed by August, 1877. This block of buildings is, therefore, in a more forward condition than any other portion of the works, having already reached the second story. This block of offices is being executed in red brick with Portland stone dressings, partly for economy, and partly because the architect is fond of good brickwork. The bricks are "purpose-made," and measure 7 in. by 5 in. by 2 in., there being five courses to the foot, including the mortar joints. The block of offices is provided in the basement with a series of strong rooms for the safe storage of documents and records, and will communicate with the Law Courts proper by covered corridors on the ground and first floors. These offices will be occupied by Masters in Chancery, Commissioners of Lunacy, and other officials whose functions are more or less inscrutable to those who are not "learned in the law." The rooms devoted to the principals or heads of departments are emphasised externally by larger and more elaborately-treated window openings than those devoted to clerks and minor officials, and this distinction in fenestration is preserved, both on the eastern side of the block, facing towards Chancery-lane, and on the western side of the block, which looks on to the great quadrangle which will intervene between the "office-block" and the "courts block." We may here note that the whole of the floors are to be of what is known as "fire-proof" construction,—*i.e.*, iron and concrete, and Mr. Street maintains that there will not be a room in the structure which will not be well lighted, notwithstanding the statements of some of his critics a few years ago. Although the block of offices is being faced with red brick, as stated, the whole of the external walls of the block in which the courts will be contained will be of Portland stone. The court-block consists, roughly speaking, of a large square surrounding the central hall, which is the chief feature of the design, architecturally speaking. This central hall will be 230 ft. long by 48 ft. wide, and will be groined in stone. It will have a number of what may be called shallow transepts on either side, these recesses giving access to staircases, by which the court-floor will be reached. These staircases will only be used by those having business in the courts, special entrances being provided for the "lounging" portion of the public. Abutting on and approached by the various corridors, the courts are arranged round the central hall, each court being provided with such adjuncts as rooms for judges, jurymen, witnesses, barristers, &c. Between the central hall and the courts, and in other needful situations, small areas for lighting and ventilation, lined with white glazed bricks, are provided. Of the central hall, only the substructure is as yet completed. In this substructure, which will be vaulted in brick, will be placed the heating apparatus. The ground-floor level of the central hall will be about on a level with the Strand; but, owing to a rather considerable rise in the ground northwards, the floor of the hall will be some distance below the level of Carey-street. The court-floor will be on a level with Carey-street; or, in other words, it will be on the first floor if approached from the Strand. Mr. Street expressed his regret that the central turret of the great hall had had to be expunged from the design, in obedience to the mandate of a First Commissioner of Works, and thereby effecting a saving of 10,000*l*., for it had to be provided for by carrying up massive masonry buttressing from the basement. This feature could not now be restored; but it was hoped that when the time came some relief to the expanse of the roof of the hall might be obtained by an addition in the shape of a lead *flèche*.

ARCHITECTURAL ASSOCIATION OF IRELAND.

FRENCH AND ENGLISH CATHEDRALS.

AT an ordinary general meeting of the above Association, on the 27th ult., the President, Mr. T. Drew, in the chair, Mr. C. H. Brien read a paper on "Two Cathedrals — Canterbury and Amiens." After a brief account of the history of the two cathedrals and some of their peculiarities the reader went on to say:—

Like the town-halls and belfries of Belgium, the cathedrals of France mark a period of greater freedom and of a healthier national life, of greater interest and of more liberal aid than in the monastic and feudal times, on the part of king and people. Most of the great cathedrals were either commenced simultaneously or were pressed on to completion so rapidly, that little advantage could be taken of mistakes or doubts. At Paris, it is true, there is evidence of a change of mind, and at Beauvais it became necessary to construct a pier between those first proposed, to render a lofty clearstory possible. There are some particulars which may be here summarised.

In England:—

1. The cathedral is often square-ended at the east, or has considerable projection in this direction, as at Westminster and Canterbury. The western end has a great window, as at Canterbury.

2. The porches are not so charged with sculpture as in France. There is a peculiar porch at Canterbury, and the west fronts of Wells and Peterborough are also exceptional.

3. The central tower, greater projection of transept, chapter-house, and proportion, length to height, are characteristic.

4. The nave is isolated from the choir, and frequently not used for service. The chapels of the apse (for the original purpose) disused.

5. There is less distinct separation of clergy and laity; the pulpit is differently placed, and the altar of lower elevation.

6. The organ stood on the choir screen most frequently, since the Reformation.

France:—

1. The chevet and its chapels generally show; externally at Amiens there is a lady chapel; at Paris, Rheims, &c., this holds good; at Cologne also.

2. The western front, and most frequently the transepts, contain great circular windows. It is so at Amiens. They are generally dissimilar and of great beauty.

3. The proportions of the nave walls seem to be normally thus: a line beneath the triforium divides the space into two; of the remainder the triforium has one, the clearstory two.

4. The organ in most French cathedrals and churches is at the west end.

The last point to be considered is the relation of these and similar buildings to the requirements of the ritual for which they are now used,—at Canterbury, the services of the Church of England; at Amiens, that for which it was originally designed. Take St. Peter's, Geneva, or the Cathedral of Glasgow, and you find the Calvinistic form of worship using a structure designed for a more imposing ritual; and at Heidelberg an old church actually divided between two sects by a separating wall, which allots its apse to one whose form of service is best adapted to its use. Throughout Germany, the mode of administering the sacrament in the Lutheran Church favours the ancient position of the altar and the use of the baldachino to give it dignity: the east end is, therefore, appropriately designed; while at Geneva the communion-table stands in front of the pulpit and against the southern wall of the nave, and the apse, like the basilica and the chapter-house, would best subserve the purposes of the consistory.

At Canterbury, as at Westminster, Classic St. Paul's, and until recently at our own Christ's Church and St. Patrick's, you find the nave unused for service, and the organ-screen blocked the view completely. Latterly, in some instances, as at St. Paul's and Westminster, the nave has become a separate church, and the difficulty is overcome by using it for special services, at which a large number of worshippers attend. At Glasgow the nave is not used for service. At Geneva, owing to its smaller dimensions, the entire building is availed of. You find thus an acknowledgment of unsuitability. Looking over the plans of buildings used from the earliest times for Christian services, you will be impressed by the changes of structure which the changes in ritual necessitated, even although we confine ourselves to the western branch of the church alone, and exclude, for instance, the peculiar plan which the Greek Church favours. If you look at the plan of San Clemente at Rome, as given by Fergusson, you can trace some of these alterations, and the German churches and the French and English supply the rest, until we gain the period when the simpler rituals and the growing importance of the sermon changed, as it were, some of the altered and enlarged structures back again to something like what seems to have been the more ancient and more simple forms.

We are now in a position to compare the two buildings we have been studying. Such a comparison may be conveniently instituted under the following general heads:—

1. The differences as to position and structure which they display.

2. Their relation to the history of architecture, locally and generally.

3. Their connexion with the political and religious influences of either country, more generally of the time in which they were erected.

4. The way in which they fulfil at present the requirements of dissimilar rituals. This question, of course, applies principally to the English cathedral.

As respects the sites on which they have been erected, Canterbury stands within a spacious inclosure, with grassy slopes and green trees, and quiet cloister. It is well displayed on three sides, and associated with the remnants of the ancient monastery, and with modest ecclesiastical residences. Amiens is not thus isolated, but in the midst of a city surrounded by houses which it boldly dominates, with no small picturesqueness of effect in tower and *flèche* and buttress. The first has characteristics in which, of English cathedrals, it is not alone. The long low nave and choir,—compared with Amiens and the other great French cathedrals,—the distinctly marked transepts, great central tower, and now corresponding western ones. Amiens, short and lofty, with great unbroken height of roof, the western towers unfinished, yet pleasingly crowned, its noble western portals and bewildering forest of flying buttresses, its eastern end is well displayed to the open space behind.

We have seen that Canterbury was connected

with Normandy by its king and its archbishop, and that there is no difficulty in tracing the influence of the imported plan and style. Amiens, like Paris, Rheims, and Chartres, was perfected in that thirteenth century which helped to carry the architectural glory of the time of Philip Augustus down to that of St. Louis; and we like to trace its history from the Pointed arches of St. Denis, Notre Dame, Paris, Rheims, and Chartres, on through to the St. Chapelle and St. Ouen, at Rouen. If you will look at the plans you will see some of these changes, the simpler west front and absence of marked transept of the Cathedral of Notre Dame, Paris. The increase of width at the choir of Rheims, and the portals, marked the transept and dissimilar spires of Chartres, while at St. Ouen we have a central tower of late development, and a combination of circular window and glazed gallery, which, with its structural surprises, seems to have reached the limit of that masonic skill and elaboration of parts which gave us the Friburg spire, the upper part of the tower at Antwerp, the fine tracery of Henry VII.'s Chapel at Westminster, and the elaborate buttresses, lofty piers, and clearstory of Amiens,—the minute panelling of the Tudors,—the perpendicular windows of Canterbury, and the great windows of the chapels of the chevet at Amiens, designed for the gratification of an increasing love of the display of painted glass; and the fretted vaults taking the place in England of the painted ceilings in France and the mosaics of Italy.

The ancient basilica, as at Rome, is familiar to us all as not only the earliest type of a building used for Christian purposes, but as also the first example of that adaptation of a structure to other uses which we have been just considering. The basilica was a building with a semicircular end, where sat the quæstor and his assessors, with an altar for oblations in front. This part, when transferred to the Christians, became the seats of the presbyters; and a president being necessary, one of them to this extent became chief, and the Christian altar took the place of the pagan. I speak of the first three centuries of our era. It seems almost certain that not only did no great separation of apse or choir prevail, but that even the distinction of clergy and laity was not maintained. Then came the separation, still traceable in this church of the fifth century,—the bishop's throne and the presbyters' seats, the altar, the enclosed choir, with the ambours for epistle and gospel, and the atrium, with its fountain. You can follow in Germany the round building for baptism and sepulture in the western apse,—the atrium reduced to the narthex; in France and elsewhere, the chevet with its chapels, its numerous altars; in Italy, the separate baptistery, as at Pisa, and the separate bell-tower; in England, the chapter-house, as I have said, and as seen at Canterbury, taking the place and fulfilling some of the offices of the basilican apse, and the synods of the church transferred from the ancient place of assembly to a separate building.

These and similar changes were of course not accomplished without political convulsions, in which the cathedrals were not the only sharers. The very names of the men whose bones lie within the precincts of Canterbury, whose statues now adorn the south-western porch, or whose works are immediately associated with it, are typical and household words,—St. Augustine, Canute, and the Black Prince, the murdered Becket, Cranmer, and Laud, the Commonwealth, the Reformation, the shattered glory of Becket's window, and the simple ritual which is still found in the premier cathedral of England.

The chairman said that he did not consider the cathedral at Amiens a success, taking into consideration its great mass and extravagance, it was so attenuated. Nothing could exceed the grace of the sculpture at Amiens and Chartres. He considered the Peterborough portal a sham, and the other English portals mentioned, though fine, did not approach the French ones. He did not think there was any theory as to ritual to be deduced from the elevation of the altar, as the differences throughout England in this respect were very striking. The planning of cathedrals should not be sacrificed for the sake of seeing and hearing. He had a great respect for M. Viollet le Duc's restorations, but did not think, excepting him, that there was an architect in France capable of restoring. The system at present carried on by Government-paid officials called architects was hurtful to the feelings of every one who had the remotest taste for archæology. He did not think the screen in Canterbury a subject for comparison with French sculpture.

Mr. J. J. O'Callaghan, in proposing a vote of thanks, agreed with the chairman as to his remarks in regard to the growing utilitarianism, as exemplified in some of our modern buildings. A spirit more opposed to the success of architecture of this kind could not be conceived. The large nave was used for particular services, such as high mass, and all other chapels and portions of the buildings were always utilised. Speaking of Amiens, he said it was with feelings of the greatest pleasure that he stood at the west end, looking towards the gorgeous choir, surrounded by the magnificent fittings, and he had never regretted the height of the vaulting. He was not sure that he was sorry the towers had not been completed. As far as he had seen of French restorations, he rather liked them than otherwise.

Mr. J. L. Robinson seconded the vote of thanks, which was carried unanimously.

The chairman, at the conclusion of the meeting, drew the attention of the members to the prizes offered by the Royal Institute of British Architects, and said he did not see any reason why some of them should not be won by members of the Association.

DEATH OF AN EMINENT CONTRACTOR.

A PAINFUL gloom has just been thrown over the town of Liverpool by the sudden and unexpected death of the mayor of the borough, Lieut.-Colonel Thomson, on Saturday last, from a severe attack of bronchitis, caught last week in London whilst on business connected with the corporation. The deceased had for several years been well known as one of the largest railway and general contractors in the country, having executed extensive works of this character not only in the United Kingdom, but also in Russia, Spain, and other Continental and foreign countries. Like the late Mr. Brassey, Mr. Peter Thomson, the deceased (Colonel, at his death, of the largest regiment of Artillery Volunteers in the country, consisting exclusively of artisans), was of humble origin. He was a native of the village of Forgue, near Huntley, in Aberdeenshire, where his father was a builder in a small way, and to whom the deceased served his apprenticeship as a mason. About the age of 22 he came to England, and sometime afterwards he and his elder brother entered into partnership as contractors, the name of the firm being George Thomson & Co. Amongst the railways and other public works which the firm — and subsequently Mr. Peter Thomson himself on the death of his brother — constructed in England and Wales, in addition to large contracts abroad, were several of the lines belonging to the London and North-Western, the Midland, the Great Western, and the Lancashire and Yorkshire Companies, the aggregate length of the railways so constructed by the deceased and his brother being upwards of 600 miles. Some of these lines involved a large outlay in consequence of the rocky character of the country through which they pass. Amongst these are those portions of the Midland Company's lines through Darley-dale to Rowsley and Bakewell, in Derbyshire, and that from Matlock to Buxton, in constructing which they carried a tunnel under Haddon Hall in order to avoid destroying that picturesque and historical old mansion. The firm also constructed several large railway stations in different parts of the country, including the new Central Station at Leeds, and the building of a railway upon arches through that town for the North-Eastern Company; likewise the erection of a new station, grain warehouses, and other building operations in Wakefield; new stations at Halifax and Bradford; the Exchange Station at Liverpool, and also the enlargement of the Lime-street Station of the London and North-Western Company in that town. But the works constructed by the deceased were by no means confined to those in connexion with railways. He deepened the great float at Birkenhead, 150 acres in extent, for the Mersey Docks and Harbour Board, and some idea of the magnitude of this contract, and the difficult nature of the work, may be estimated from the fact that it kept employed for three years about 46,000 men and 240 horses, and that from two to three million cubic yards of excavations were made. He likewise constructed the Carriers' Dock and the Canada Half-tide Dock at the north end of Liverpool, together with several reservoirs and other works in connexion with waterworks at Liverpool and other places. After having realised a colossal fortune the deceased retired from business a few years ago on becoming a director of the Lancashire and Yorkshire Railway Company, being succeeded by his chief manager, Mr. William Dransfield, who now continues the business under the firm of Dransfield & Co. The deceased permanently took up his residence at West Derby, near Liverpool, in 1849, where he built himself a large palatial mansion, called Layfield Priory, situated on an estate of upwards of 100 acres in extent. The great practical knowledge which he possessed caused him to be frequently consulted on difficult points connected with his profession by some of the most eminent engineers, including Sir John Hawkshaw, Mr. George Robert Stephenson, and others. He was a member of the Institution of Civil Engineers, and was a guest at the dinner of that body, when in London, only a fortnight ago.

The deceased as mayor had in contemplation the holding of a series of festivities, which were to include among others, a banquet to representatives of science, literature, and art.

KRUPP AT PHILADELPHIA.

THE catalogue of the objects exhibited at Philadelphia by the Essen establishment of Herr Krupp has just been published. It is of especial interest on account of the heavy ordnance sent to the Centennial Exhibition. Although in number behind those shown at Vienna in 1873, nearly all the guns sent to Philadelphia by Herr Krupp are of an entirely different construction. Besides the new 35½-centimètre gun for coast defence—the latest of Krupp's monster creations—the firm exhibits one of the long 24-centimètre guns shown already at Vienna; but, besides these, an entirely new 8-centimètre gun and a 6-centimètre mountain gun, both recently introduced in the German army; also the saddles and harness for the latter gun, as well as an especially well-finished field-gun with carriage of the above kind, and a series of projectiles. According to the catalogue, the new German field-guns excel in their effect anything hitherto produced by other countries. Not less interesting and important are the effectiveness and construction of the new mountain-guns. It may be expected that the new 1,000-pounder sent to America, which latter country is at present left far behind in the race of construction of ordnance, will attract some attention. To be noted are also the two ship's engine-beams sent over to Philadelphia. One of them weighs 13,500 kilogrammes, made from a crucible steel block weighing 30,000 kilogrammes by the 50-ton steam-hammer. It is destined, with its three cranks, for an engine of 2,500 horse-power of a vessel now building for the German navy. As far as we know, those beams, of which the other, weighing 9,000 kilogrammes, is for a Transatlantic steamer, are a new branch of industry of the establishment, which did not exhibit anything in that line at Vienna.

We see from statistics appended to the catalogue, similar to those published in 1873, that Krupp's establishment at Essen employs at present 15,500 people, including 5,000 puddlers, and that, notwithstanding the bad state of business in Germany generally, no decrease,—in some branches even an increase,—is perceptible. Thus, since 1873, the number of cupola and puddling furnaces has been increased by nineteen, that of boilers by fifty-eight, that of steam-hammers by seven, and that of steam-engines by eight, of which one of 1,000 horse-power. The network of rails laid down in the extensive works has increased in the same proportion, and consists now of 39·92 kilomètres of the usual gauge, and 18 kilomètres of a narrow gauge, upon which run twenty-four engines. To the many institutions and buildings for the use and recreation of the workmen already in existence, four elementary schools with twenty-one classes and four industrial schools for women and girls have, within the last few years, been added. Another sign of the extension of the immense works since 1873 is, that Herr Krupp now owns four steamers of 1,700 tons each, which are principally employed in carrying iron ore from the mines on the north coast of Spain near Bilbao, now the property of the Essen manufacturer.

Proposed Convalescent Hospital for Salford.—The Salford Corporation has been offered by a gentleman, who at present does not wish his name to be made public, a site and buildings outside the borough for a convalescent hospital. The value of the gift is estimated at upwards of 20,000*l*.

SALE OF THE SURPLUS PROPERTY OF THE EAST LONDON RAILWAY COMPANY.

A SALE of the surplus lands and buildings belonging to the East London Railway Company took place at the Auction Mart, Tokenhouse-yard, on the 9th inst., Messrs. Farebrother & Co. being the auctioneers. The property, which was in fifty-three lots, consisted of twelve lots of freehold building land in Wapping, near the London Docks, which was purchased by the company, and cleared of the low-class dwellings standing upon it, in order to admit of the construction of that portion of the railway in the neighbourhood of the London Docks, which has just been opened for traffic. Other portions of the property offered are in Rotherhithe and Deptford.

The first lot was a block of land immediately opposite the Wapping station, containing 17,000 superficial feet, the estimated value of which, as stated by the auctioneer, was 17,000*l.*, or 1*l.* per foot, but as the highest bid was 5,900*l.* the property was withdrawn, as were also the next eleven lots, all situated in the same neighbourhood, and for which the biddings were about at the same rate as for the first lot. The aggregate estimated value of this portion of the property was about 70,000*l.*

The property next submitted consisted of twenty-three lots of freehold building land at Deptford, situate between the East London line and the London and Greenwich section of the South-Eastern Company, and which the East London Company have laid out for the erection of about 800 houses of an ornamental character, with gardens attached, for the artisan class. The streets are laid out at right angles, and have all been sewered by the railway company, and already about 200 houses have been erected, and several others are at present in progress. The auctioneer, in introducing this part of the property, observed that it might appropriately be described as a model village, and its almost immediate proximity to Southwark Park increased its value for building purposes. Ten of the lots, which contain a frontage of 96 ft., and 65 ft. in depth, were sold at prices ranging from 280*l.* to 410*l.* The remaining lots were bought in.

The next and concluding portion of the property comprised in the day's sale consisted of sixteen leasehold houses in Milton-court-road, Deptford, and let to weekly tenants at 18*l.* 4*s.* per annum including taxes. An inquiry from a gentleman present whether there was reasonable security for the rents of such a class of property being paid, elicited from the auctioneer an interesting reply as to the management and treatment of cottage property; he expressed his belief, from experience, that if the owners of such property would treat their tenants well by keeping the property in order, and not put too high a rent upon it, there was not a better paying class of houses than those occupied by weekly tenants. His firm received 5,000*l.* a year in rents for such property, and they had never lost more than 25*l.* a year. The three first lots were knocked down at 150*l.* per house, and the purchaser availed himself of the auctioneer's offer to purchase the whole of the remaining lots at that sum, the aggregate purchase-money being 2,400*l.* on this part of the property, and upwards of 7,000*l.* on the entire day's sale.

SANITARY CONFERENCE.

AT the conference of medical officers of health, and members of the Social Science Association, held under the presidency of Lord Aberdare, and which followed the recent Sewage Conference, the following resolutions were passed:—

"1. That the existing division of the country into urban and rural districts does not enable local authorities to fulfil their obligations in the most effective manner.

2. That the same sanitary laws be applied to the whole area of the country without distinction.

3. That in any reconstruction of local areas it is desirable to keep in view the advisability of securing one subdivision of the country for sanitary and other purposes, such subdivision to be as far as possible on the lines of the existing municipalities, unions, and counties.

4. That, in the opinion of this Conference, it is desirable that a Commission be appointed to consider and readjust, with the concurrence of the Local Government Board, the boundaries of the existing districts to be hereafter formed.

5. That the appointment of a County Board, consisting of elected members and partly of others, nominated by the Court of Quarter Sessions, is desirable.

6. That the duty of such County Boards, so far as they relate to sanitary matters, should be to exercise a control over the salaries and dismissals of the officers of the Local Boards not being municipal boroughs, to hear appeals from one portion of a district against the decision of their Board as to the incidence of expenditure for works of only partial advantage, and to undertake the conduct and supervision of such works as from their nature and expense cannot be undertaken by separate Local Boards.

7. That the powers and machinery at present possessed by local sanitary authorities are inadequate to the purposes for which they are intended; especially but not solely, in respect of means for preventing the spread of disease both from the want of early information of its existence and also of the means of checking its progress from want of power to prevent the erection of houses on unhealthy and improper sites and to secure in certain cases due provision of water, and from want of means to acquire with sufficient facility and economy land for public purposes.

8. That the incidence of taxation for sanitary and other purposes of local government should, as nearly as possible, be proportioned to the direct benefit accruing to the several parts of the districts.

9. It is desirable that the officers of sanitary authorities should, so far as practicable, be restricted from other than the official duties for which they are specially engaged, and that in order to promote this object it is essential that the area of suspension should be made as large as can be efficiently worked.

10. That a health officer or assistant should, where it is practicable, be appointed to every local government district or combination of districts.

11. That the several officers should be in communication with each other and with the health officer especially attached to the County Board.

12. That the salaries be such as to insure the services of first-class members of the medical profession, devoting themselves entirely to health-service of the country.

13. That in future it is desirable to appoint, at least to the higher offices, men who have passed an examination in state medicine.

14. That the above regulations are equally desirable in the cases of surveyors and inspectors of nuisances so far as they are applicable.

15. That, in the opinion of this meeting, the powers of the Public Health and other Sanitary Acts which are of a permissive character should, as far as practicable, be made compulsory.

SUBSIDENCE AT THE NEW WORKS OF THE EAST LONDON RAILWAY.

AT the meeting last week of the guardians of St. George's-in-the-East, the surveyor reported with reference to the effect produced by the new works of the East London Railway on the workhouse buildings. He stated that although the under-pinning of the building had been duly carried out, there were indications that some slight subsidence was going on towards the railway tunnel. The subsidence had increased during the last six months, and, although in the present state it gave no cause for alarm, he hesitated to advise any claim being closed with the railway company. This was agreed to.

Street Improvements at Warrington.—The Warrington Town Council has decided, by a large majority, to carry out at once a scheme of improvement, the largest and most costly which has ever occupied the attention of the Council. It is proposed to widen Bridge-street—the principal thoroughfare, and most inconveniently narrow—from Bridge-foot to Friar's-green, and eventually to the top of Bridge-street. This improvement alone, it is estimated, will cost 45,000*l.* It is also proposed to open Wilson Patten-street to Bridge-street, which will materially relieve the pressure of traffic in the latter thoroughfare. It is in contemplation, too, by the Corporation to purchase the gasworks from the company, and a scheme is also on foot for enlarging the present market at a cost of 20,000*l.*

PROVIDENT INSTITUTION OF BUILDERS' FOREMEN AND CLERKS OF WORKS.

ANNIVERSARY DINNER.

MR. E. M. BARRY, R.A., presided at the anniversary dinner of this Institution, which was held at Willis's Rooms, St. James's, on the 12th inst. About 120 members and friends were present, including Mr. E. J. Reed, M.P., Mr. George Plucknett, F.S.A. (Governor of the Institution), Mr. Charles Barry (President of the Royal Institute of British Architects), Mr. C. F. Hayward, F.S.A., Mr. Cundy, Mr. Rogers, &c. The Institution was established in 1842, and has, during its existence, been the means of relieving thirty-one pensioners, many of whom have received small annuities for some years past. At the present time there are twenty pensioners on the books, who collectively received during the year ending December 31st last the sum of 239*l.* 4*s.*

The usual loyal and patriotic toasts were enthusiastically received, Mr. E. J. Reed, M.P., whose name, as the former Chief Constructor of the Navy, was coupled with the toast of "The Army, Navy, and Volunteers," making a humorous speech, in which he compared the difficulties of naval architects with the difficulties of those who build on *terra firma*. He remarked that it was no easy problem to build a vessel which should serve, not only as a fighting-ship, but as a residence, and sometimes (as in the case of the *Serapis* and some other vessels of late) as a menagerie. The mere building of a vessel like the *Inflexible* was only a portion of the problem which the naval architect of the present day had to solve. When built, she had to be driven at the rate of a quarter of a mile in a single minute, and must be capable, when running at that speed, of being slackened and turned completely round and driven off in the opposite direction in something like a couple of minutes. This was no light feat to accomplish, taking into account the enormous mass and weight (say 10,000 tons) of a large ironclad. As showing the extent to which mechanical means are supplanting seamanship for the manœuvring of such vessels, Mr. Reed stated that the *Inflexible* would be worked by something like forty separate steam engines.

The chairman, in proposing the toast of the evening, "Prosperity to the Provident Institution of Builders' Foremen and Clerks of Works," said:—In my professional life I have had a good deal to do with builders' foremen and clerks of works, and I may say at once that my intercourse with both classes has been of the most satisfactory description. When I was a good deal younger than I am now, I was very glad of their aid and assistance, and if I can be of the slightest aid and assistance to them at any time I can only say that it will give me the most sincere pleasure. This society, I think, deserves our warmest support, for it embodies that great principle which we in England so much prize,—the principle of "self-help." It is an institution of the classes indicated for improving their own status and position, for rendering assistance to the unfortunate, and for making provision for the widows and orphans of deceased members. I think the enumeration of these objects is enough to make us all wish it, most heartily, success. I am told by the secretary that since the institution was established, in 1842, the sum of 4,092*l.* 16*s.* has been paid in pensions to aged and infirm members and their widows and orphans. During the same period the sum of 595*l.* was paid for the purpose of temporarily assisting afflicted and distressed members, to console them in their troubles and anxieties, and to enable them by-and-by to recover their strength and energy, and to return to the assistance of their less fortunate brethren in the future. The number of pensioners at present on the list is twenty,—not a very large number, as it seems to me: I hope it may tell of the prosperity of the classes in question, but I am afraid it speaks of a small balance at the bank. There was received, during the year 1875, the sum of 235*l.*, and I shall be glad if the Secretary is next year able to announce that a larger sum has been received in 1876. The number of honorary members is now 52, and of ordinary members 79, numbers which, however large, do not quite so fully represent the classes as I should wish to see. I think we are all interested, as practical men, in the condition and the success of the English trades, at any rate so far as they relate to building; and I look upon the builders' foremen and clerks of works as the very aristocracy of those trades. We are very

glad indeed to see them in a flourishing condition, for we know that their ranks are never closed to deserving merit, wherever it comes from. It was my task a few years ago to carry out a large work in masonry for the English Government in one of our colonies. I very much wanted a good clerk of the works, and applied in my need, as I have often since applied, to your excellent Governor and my old friend, Mr. Plucknett. Mr. Plucknett was kind enough to recommend to me a young mason then in his employ, receiving weekly wages and working at the banker. That young man went out for me as clerk of the works. He carried out that building not only to my satisfaction, but so to the satisfaction of the Government that he has remained in that colony ever since in the Government employ, and it was only the other day that I had the great satisfaction of signing his paper, and writing to the secretary of the Institution of Civil Engineers to recommend him as a member of that honourable Institution. Now that is an instance of what a man may do if he chooses. The working classes of this country have greatly improved their position of late years. They have obtained higher wages; they have obtained more leisure. I am not disposed to say one word, except to rejoice that they should raise their status in any legitimate manner, but as an architect I am particularly anxious that, while the position of the workman is improved, the quality of his work shall not diminish. We are often told that the work of to-day is not what the work of yesterday used to be. We go over the length and breadth of the land and see marvellous masonry, carpentry, and ironwork in our cathedrals and churches, and plaster ceilings in Elizabethan houses,—kinds of work which it taxes us very much indeed to rival in the present day. I cannot but think that in order to rival it we require a very great extension of education, and particularly of that technical kind which is so invaluable to the craftsman. I am also one of those who think that the mere question of healthy houses for artisans is no insignificant element in the bringing about of a better position for the workman. It is not enough to give a man more money and more leisure unless we give him a place where he may devote them to culture and improvement. Both these points are pressing upon us nowadays, and they are matters upon which we may fairly ask the State to give us some assistance. But we must not ask too much. We must show a disposition to help ourselves before expecting others to help us. It is greatly to be desired that the great trade societies of the country should give their aid and assistance to these objects. If they turn their attention entirely to economical questions, such as the rate of wages, &c., we will ask of them that where there is a fair day's wage there shall be a fair day's work, and that they should exert themselves to see that the work of to-day loses nothing by comparison with the work of antiquity. We shall ask them to endeavour to make the workman proud of his work, for in no other way will work be got to be thoroughly done. We find the best work of its kind in England, and we know that in English workmen of the present day are to be traced those great characteristics of the English workman of old,—perseverance and skill. I cannot but think that the establishment of societies such as this may help to perpetuate those characteristics, by showing that there is no limit in this country to the success which may be obtained by any man who thoroughly and heartily does the work which is placed before him. It only remains for me, after thanking you for the indulgence with which you have listened to these remarks, to propose to you, "Prosperity to the Provident Institution of Builders' Foremen and Clerks of Works."

The toast was enthusiastically received, and the secretary (Mr. Bedford) announced a list of subscriptions and donations amounting to 152*l.* 4*s.* 6*d.*

The remaining toasts were, "The Chairman" (proposed by Mr. E. J. Reed, M.P.); "The Governor, Trustees, Patrons, Donors, and Subscribers," coupled with the name of Mr. Plucknett, the governor; "The Architects," proposed by Mr. Rogers, and coupled with the name of Mr. Charles Barry, president of the Royal Institute of British Architects; "The Builders," proposed by Mr. Cundy, and associated with the name of Mr. White (Scrivener & White), who, in responding, said he was sorry the Institution was not more warmly supported by the building trade, but the mode in which its affairs were conducted only needed to be better known to greatly increase its supporters; "The Stewards," coupled with the name of Mr. Fraser; and "The Ladies," proposed by Mr. C. F. Hayward, and responded to by Mr. Samuel Hill. Mr. Turner acted as toastmaster, and during the evening a selection of vocal music was given under the direction of Mr. K. C. Richardson, assisted by Madame Thaddeus Wells, Madame Alice Barnett, and Mr. C. A. White, Mr. William Miller presiding at the pianoforte. Altogether the gathering was a very successful one.

GLASS IN THE CHAPEL OF KEBLE COLLEGE, OXFORD.

ATTENTION having been directed to the Memorial Chapel erected to the memory of the late Rev. John Keble, author of the "Christian Year," an account of the stained glass and mosaic decorations which it contains may not be inappropriate. The munificent donor, the late Mr. William Gibbs, of Tyntesfield, near Bristol, spared no expense in having these, as also the entire building, carried out in the completest manner possible, the whole forming a memorial worthy of the great Christian poet. The artist is Mr. Alexander Gibbs, of 38, Bedford-square, and 21, Bloomsbury-street. This is, we believe, the first work of any magnitude that has been carried out in England in mosaic, it being usual to send the work for execution to Venice; but the artist, in receiving the commission, resolved to have the work done in England, so that the necessary personal supervision might be given. For this purpose Mr. A. Gibbs sent to Venice, and kept at a considerable expense the service of the chemist to the late Signor Radi, of Murano. Under his directions the necessary furnaces and appliances for the manufacture have been erected. Venetian artists were also engaged to carry out the principal portions of the mosaic work, the numerous designs and cartoons being executed under the artist's own hand. The decorations of the chapel consist, so far as the mosaic is concerned, of twenty-nine large panels, three of these at the west end forming one subject—that of the Last Judgment. In the upper part of the centre panel our Lord is shown enthroned, with the apostles, attended by angels bearing the emblems of His Passion, the Cross, the Crown of Thorns, the Spear, the Sponge, and the nails. In the lower part of the centre panel, St. Michael, with the scales and sword, divides the saved from the condemned. The panel on the right hand of our Lord shows the saved accompanied by angels, who point the way through the gates of Heaven, while on the left are the condemned, chained to each other in groups, passing into torment, while above in each panel is an angel sounding the trumpet of the Resurrection. At the base of the centre panel are the words "Hereafter ye shall see the Son of Man sitting on the right-hand of Power, and coming in the clouds of Heaven." Facing this under the large east window is a large quatrefoil panel from the Apocalypse, flanked by two panels with standing groups of saints. The treatment shows Our Lord as He appeared to St. John in the Island of Patmos, surrounded by the seven golden candlesticks, typical of the seven churches of Asia, while round His extended right-hand are the seven stars, symbolical of the chief ministers. On the south side of the chapel, as you enter from the west door, are mosaics arranged in groups of panels. The first one is a standing group of saints with their appropriate emblems; following which is a set of three, with incidents from the history of Noah. The centre panel, representing Noah's Sacrifice, shows the patriarch surrounded by his sons and their wives, worshipping God in front of the altar he had erected, while in the background is the Ark, symbolical of the Church, the rainbow inclosing the whole. On either side are subjects showing, in the one, Noah and his sons planning and building the Ark; in the other, the entry of the animals, as also Noah and his family, into the Ark, which in each case is designed to represent "The Church." The three panels next these illustrate the history of Joseph. In one is shown Joseph dreaming in the field of his future supremacy over his brothers; the dreams are shown as visions at the top of the subject. The centre panel shows Joseph being sold by his brethren for twenty pieces of silver; and the remaining one is Joseph as ruler recognising his brethren and forgiving them. Following this, as a single panel, is the Resurrection of our Lord. Angels with censers adore Him as he steps triumphant from the tomb, while the dismayed soldiers shrink on either side. Next in order to this panel are two, containing standing figures of saints, which in each case turn towards the chancel. Facing these on the north side are two other panels with standing saints, turned as the last to the chancel. Facing the Resurrection is the Crucifixion of our Lord. The Magdalen is shown kneeling in grief at the foot of the Cross, whilst the Divine Mother and St. John stand on either side. Slightly in the background are two soldiers with spears, and one with the sponge; two angels in attitude of devotion, one bearing the chalice, are introduced in the upper part of the subject. Then comes a group of three panels, from the life of Moses, Moses and the Brazen Serpent as a type of Christ, being in the centre; in the base is shown the people bitten by the fiery serpents, while Moses directs their attention to the Brazen Serpent. In the side panels are shown, Moses as the Lawgiver, with the tablets in his hand, coming down from the Mount, while the people kneel in awe at his feet; and in the other Moses is pictured striking the rock that the people may have water at Meribah. Three panels succeed these, which tell the story of Abraham, as, in the centre, the sacrifice of his only son Isaac on Mount Moriah. Abraham and Isaac occupy the centre, while at the base of the mountain are shown Abraham's servants with the ass; the ram in the right-hand corner is seen caught by the horns in a bramble, while an angel, staying Abraham's hand, calls his attention to it. The side panels are occupied respectively with the meeting between Melchisedec and Abram, who, accompanied by his soldiers, is offering tithes to Melchisedec after the release of Lot. In the right-hand panel the patriarch is entertaining the angels. The list of subjects on the north side closes with one remaining panel, showing Old Testament saints.

By the arrangement of these it will be seen that the Old Testament subjects as types of Christ occupy the western portion of the church, while the chancel half is devoted to the New Testament subjects as anti-types of our Lord. In the north transept there remain three panels, forming one bay, filled in the centre with the nativity of our Lord. Joseph and Mary are shown standing in devotional attitudes over the infant Jesus, while worshipping shepherds surround the crib in the foreground; an ox and ass are introduced to point the stable in which the divine Infant lies.

The large five-light stained-glass east window is filled as an Ascension. The treatment of design here, as indeed in the whole work, is rather severe. Our Lord, in a vesica, occupies the upper half of the centre opening, standing and kneeling figures of the Apostles and Blessed Virgin filling the remaining four openings, while in the tracery are angels holding scrolls bearing the inscriptions, "This same Jesus which is taken up from you into Heaven, shall so come in like manner as ye have seen him go into Heaven." The glass used is in every instance of the very best quality, and great attention has been paid throughout the whole work, both in mosaic and glass, to secure a harmonious balance of colour. The west window, on account of the flood of light to which all west windows are subject, has been treated in a slightly richer key of colour. It is filled with eight figures, the window (a five-light) having in three centre openings, two figures, and in each side opening one figure, all being seated; these are, the four greater prophets,—Isaiah, Jeremiah, Ezekiel, and Daniel; the kings David and Solomon; and Samuel and Elijah, these figures referring, as do the mosaics, to the earlier dispensations. The four three-light nave windows are filled with the twelve minor prophets, two windows being on the north side and two on the south. The figures stand in niches, while above and below is grisaille glass, similar in character to that in York Minster. In the chancel we have four two-light windows, the two on the north side contain the figures of the four great Latin fathers of the Church,—St. Jerome, St. Ambrose, St. Gregory, and St. Augustine. On the south side the corresponding windows contain the figures of the four great Greek fathers,—St. Chrysostom, St. Basil, St. Athanasius, and St. Gregory Nazianzen. The glass of the chancel is of the same tone as that in the east window, and goes well with the spirit of the mosaic. In the transept are two three-light windows, which are occupied in the centre of each respectively, figures of SS. Peter and Paul, with the evangelists Matthew and Mark in the one, and in the other Luke and John.

The whole of the work has been carried out at the artist's new studios in Bloomsbury-street.

Mr. Gibbs, under the same architect (Mr. Butterfield), lately placed a large wall decoration in encaustic tiles on the north wall of All Saints' Church, Margaret-street, to the memory of the late Rev. Upton Richards, first vicar of the church.

THE PROPOSED TOWN-HALL, HASTINGS.

AT a meeting of the Hastings Town Council, on the 5th inst., the following report of the Special Committee on the new Town-hall was read and adopted:—

The letter from Messrs. Cross, Wells, Jeffery, & Skiller, re the new Town-hall, which was referred to this Committee from the last Council meeting, and which stated that Messrs. Howell & Son were at the present time willing to undertake the building of the Town-hall, &c., for the sums following, viz.:—Foundations, 4,480*l.*, superstructure, 18,820*l.*,—was read, and Messrs. Jeffery, Skiller, and Wells, three of the architects, then attend to explain the reason of the tender being reduced by 2,790*l.*, when the following alterations and reductions which have been made by them were read over, viz.:—

1. Substituting clamp bricks for kiln bricks.
2. Reducing the height of large hall and Police Court to that originally shown in competition plans.
3. Reducing amount of Bath stone.
4. Substitution of bricks in cement for iron columns under large hall.
5. Reducing number of iron doors to safe.
6. Substituting Bangor slates for Whitney (*sic*) ["Whitland"] Abbey slates.
7. Substituting slates for lead on turrets, and reducing size of turrets.
8. Omitting moulded nosings to steps of grand staircase.
9. Substituting Keene's cement for stone in window dressings of large hall.

And the committee having fully considered the matter and viewed the detailed plans, estimates, &c., recommend the Council as follows:—

1st. To accept and agree to the alterations and reductions numbered 1—6 inclusive, but to let those numbered respectively 7, 8, and 9, remain as originally put.

2nd. To accept the tender of Messrs. Howell & Son to do the works for the price mentioned in the letter of Messrs. Cross, Wells, Jeffery, & Skiller, the Council paying them (Messrs. Howell & Son) the extra cost caused by the alterations, &c., numbered respectively 7, 8, and 9, not being allowed. The acceptance of the tender being subject to the consent of the Lords Commissioners of her Majesty's Treasury to the borrowing of the money for erecting the buildings, &c., being obtained.

3rd. That the town clerk be forthwith instructed to take the necessary steps to obtain such consent.

4th. That the resolution passed at the Council meeting, held on the 1st of January, 1875, limiting the amount to be expended on the new town-hall to 20,000*l.*, be rescinded; and that the Council authorise the expenditure of a sum in accordance with the acceptance of the above tender.

5th. That the premiums awarded in the competition be now paid, the first of 100*l.* to Messrs. Cross, Jeffery, Skiller, & Wells, and the second of 50*l.* to Mr. E. Heffer, of Liverpool; the third, of 25*l.*, having been ordered to be paid to Messrs. Lee & Smith at the last Council meeting.

We shall give illustrations of the design in an early number.

THE IRRIGATION OF INDIA.

ON the 5th inst., at a meeting of the Indian section of the Society of Arts, a paper entitled "Irrigation Works in India, with especial reference to their Remunerativeness," was read by Mr. W. T. Thornton, C.B. The lecturer said that in India the State had, within the last forty years, done a very great deal for irrigation, and that by the works constructed water could be distributed over very large tracts of country. According to the latest official accounts the total of the capital which had been hitherto laid out on irrigation works in various provinces by the British rulers of India was no less than 13,260,295*l.*, of which 6,612,742*l.* were obtained from ordinary income, and 6,647,553*l.* consisted of borrowed money. With regard to the revenue from these irrigation works the statistics varied considerably, many provinces returning a large per-centage on the capital outlay, while other works were carried on at a loss, as the canals did not pay their working expenses. For the whole of India, however, the net revenue of irrigation works was stated as 1,021,430*l.*, or 7·7 per cent. out of total expenditure. The figures of this total expenditure were somewhat open to revision, as they did not take into account the sums expended in many cases by native rulers on ancient canals, and the interest which had accrued on the amounts expended during the time occupied in constructing the works. He considered, therefore, that in considering the question, it was fair to add to the official total of outlay a million and a half for loss of interest during construction, two millions as the extra cost in connexion with the older works, and 400,000*l.* for compensation to landowners and capitalisation of land revenue sacrificed, and these sums would bring up the total expenditure to (roughly speaking) 17,210,000*l.* From this, however, a very important deduction was to be made on account of incomplete and partially-abandoned works, and this (amounting with interest to 3,640,000*l.*) brought the total amount down to 13,570,000*l.* Upon this sum the total revenue of 1,020,000*l.* gave a return of 7·5 per cent., and this favourable result had, he thought, been fairly arrived at. Independent of this profit on the investment of capital, the benefits derived from irrigation on the recurrence of drought or famine in some provinces was incalculable.

THE RECONSTRUCTION OF THE PARIS WINE DOCKS.

CONNOISSEURS are engaged in a bitter controversy concerning the preservation of wine. A portion of the great wine docks at Bercy are to be rebuilt, enlarged, or improved, and the committee appointed by the Paris Municipal Council to attend to this matter have held frequent sittings of late. According to the project generally approved by the members of the administration, each new building is to consist of two store-rooms, one on the level of the earth, and the other above. A rail running along an arcade built for this purpose will give easy access to the stores kept on the first floor. The wine growers and dealers are, however, almost unanimously opposed to this system of two stories. Should the difficulties of access be overcome, they maintain that the wines, especially the Burgundy, cannot be well preserved when placed so far above the earth. They eschew all elaborate schemes, and simply demand two rough walls separated from each other by a space of 13 mètres, and covered over by an ordinary roof. Such a construction is not calculated to suit the Parisians, ever ready to seize any opportunity to augment the beauty of their town; but those who are most interested in the preservation of wine maintain persistently that wine must not be carried too high above its native earth. What is the evidence as to any evil result from so storing wine?

PERMANENT CIRCUS IN LIVERPOOL.

A PERMANENT circus is to be erected in Liverpool at the top of Brunswick-road, opposite the Necropolis in the West Derby-road, for Mr. Charles Hengler. This is a very central position, nearly the centre of Liverpool, taking the map as our guide. Over 400 'buses pass the site every day. It will be the largest circus in England, holding about 4,000 persons. It will be 100 ft. wide, 140 ft. long, with a gallery over the front end and two sides, carried out with ornamental fronts and carton pierre ornaments. The ceiling will be an arched one, with a new style of sunlight. The gallery entrance and pit exit will be in Walker-street. The pit entrance and the box and parterre entrance will be in West Derby-road. There will also be five shops in this road one story high. The stables will be built of brick and stone, with all the newest ornamental iron stable fittings, ventilated and detached from the circus. A dozen stables and coachhouse-yard will also be provided in Walker-street for the convenience of gentlemen driving to the circus, so that horses and men will be provided with shelter immediately on arrival at the building. The above works have been designed by Mr. J. Robinson, architect, who has carried out many permanent circuses in England for the same proprietor. The contract has been let to Mr. Samuel Campbell, of Liverpool. The works will cost over 12,000*l.*

Floods in the River Ouse.—A few days ago the Mayor (Mr. J. T. Hobson) and several of the Corporation of Bedford who had been appointed inspectors, met and went down the river as far as Barford Sluices and up to Biddenham and Bromham Mill, visiting on their way the mills, sluices, and locks, accompanied by Mr. Grantham, C.E., Inspector under the Drainage Acts under the Inclosure Commissioners, who has been called in by the Corporation to inquire into and examine the state of the river as to the works necessary to prevent floods, and to advise them in a preliminary report as to the legislative or other means which should be most expedient to be adopted. It is hoped, as a result of this inspection, that the town of Bedford can be relieved and due regard paid to the several interests, such as those of navigation, millowners, and the proprietors and occupiers of the lands on the banks of the river both above and below the town.

THE STATE OF THE BUILDING TRADE IN BRISTOL.

THE building trade is at present in a somewhat unsettled state in Bristol. Business is not very brisk, and most of the operatives in the various departments are agitating for increased wages. Some months ago the stonemasons gave notice of a rise of ½d. per hour, making 8d., to begin about the middle of June next. The Master Builders' Association have taken the matter into their consideration, and decided that the demand was not justified by the state of trade, and at the same time suggested some very reasonable modifications of the masons' rules, as to walking-time, apprentices, and piece-work. The men, however, indignantly rejected the alterations, which the representatives announced were out of all character with the progress of their society. There the matter rested till Thursday night, when a general meeting of the building trade was held, and, after considerable discussion, it was decided to let things take their course.

The builders' labourers have also applied for an increase in the rate of pay, and demand ½d. an hour addition, making 5½d., to begin early in August. About twelve months ago they made a similar demand, and the arbitrator who settled the dispute gave them ½d. per hour increase during the winter months. This request the Employers' Association have refused to accede to.

The stone sawyers have just applied for a rise of 1s. per 100 ft. The application led to a good deal of inquiry amongst the builders, and it is stated that the prices at present paid vary greatly, some of them being extravagantly high. The Association is now engaged in drawing up a scale for the guidance of the trade generally.

The painters who struck on Monday week at two shops for an advance of 1d. per hour, raising the wages from 6½d. to 7½d., and the remainder throughout the city (numbering 400 or 500) who were locked out on the 8th inst. are still out of work. The busy season for painting work has just commenced, and the lock-out is rather awkward for the contractors and decorators; but the masters say they will not give in.

NEW PUBLIC PARKS IN THE PROVINCES.

Rotherham.—Rotherham is now possessed of a public park and recreation grounds known as "Boston Castle Park." It consists of twenty acres of land at the top of a hill, which, being 300 ft. above the town, and 400 ft. above the sea level, is perhaps the highest point in the borough. On the west side of the hill there is an umbrageous wood. From the centre of the park a large quantity of red sandstone has been quarried, and the precipitous and rugged escarpment that has been left, and the sheltered plot of green sward below, and which is intended for the use of the votaries of croquet, are not altogether void of the features of romantic scenery. To Mr. Alderman Guest is due the credit of first drawing attention to this spot as an appropriate place, for many reasons, to be formed into a people's park. However, it was some time before he induced others to acquiesce in his view; but in May, 1873, a memorial, signed by a large number of the inhabitants, was presented to the Town Council, asking that steps should be taken to lease Boston Castle grounds. The wish so expressed was acceded to, and the land was soon after obtained on lease for forty years, from the Earl of Effingham, at a yearly rental of 50*l.* The park has not yet been formally opened, but it has already become a popular place of resort.

Salford.—With a desire to provide more extensive means of recreation for the people, the corporation of Salford some three or four years ago decided to form three new parks in different parts of the borough,—one at Higher Broughton, another at Pendleton, and a third in Ordsal Ward. The two first-mentioned, which are rapidly approaching completion, will be thrown open at Whitsuntide next, and the third will be finished for the summer of next year. The new park at Broughton stands on the site known as the "Gravel Pits," and is bounded by Great Clowes-street, Great Cheetham-street, Grecian-street, and a new thoroughfare to be called Vavasour-street. It is the largest of the three parks which are being constructed, and covers an area of sixteen acres. Originally the land presented a very flat surface, but by excavations which have been carried on it has been rendered undulating in appearance. The work of laying

out the park was commenced in September, 1874. The land is inclosed on all sides by iron railings. The principal entrance will be in Great Clowes-street. In the lower portion of the ground an ornamental lake has been formed, which will be spanned in the centre by an iron girder bridge. The arrangement of the flower-beds and the terraces had been executed under the direction of Mr. Henry Moore, the head-gardener at Peel Park. The park at Pendleton is situate at the end of Seedley-road, Pendleton, and extends to a locality well known as the "Land of Nod." The park covers from twelve to thirteen acres of land, purchased at a cost of 5,000*l.* in March, 1873. A number of cottages, standing in the "Land of Nod," which detracted from the appearance of the park, were also bought by the Corporation, and having since been demolished, the land upon which they stood has been added to that acquired. The park has a good situation, having a slope to the south, and being well sheltered by trees. In the lower portion the land is naturally undulating. A lake similar to that in the Broughton Park has been constructed. The land has been laid out by Mr. Moore. There will be several entrances to the park. Ordsal Hall Park is not so favourably situated as those in Broughton and Pendleton; but, being in one of the most thickly-populated districts in the borough, will probably be the most largely frequented. It consists of fifteen acres of land, which was purchased from Lord Egerton of Tatton. Up to the present comparatively little has been done towards its completion, but now that the parks in Broughton and Pendleton are nearly finished, the Corporation will be able to devote more attention to it than has hitherto been possible, in order that it may be opened next year.

NEW PUBLIC BATHS.

Attercliffe.—At the last meeting of the Sheffield Town Council, Mr. Eaton referred to a motion passed by the Health Committee, that inasmuch as the amount of the tenders for the erection of public baths at Attercliffe greatly exceeded the sum authorised to be borrowed by the Council, with the consent of the Local Government Board, the Borough Surveyor be instructed to prepare new plans, including one swimming-bath instead of two, in order to reduce the cost below the amount of the original estimate. Mr. Nadin said it had been estimated that the baths would cost 8,500*l.*, but the amount was really 11,000*l.*, and with furniture, &c., the cost would be increased to 12,000*l.* The committee had thought it would be best to build one large bath and slipper baths above, which might be erected under 8,500*l.*, including furniture and fixtures.

Maidstone.—Meetings have been held in Maidstone in furtherance of a scheme for the erection of new swimming-baths. Plans have been prepared by Mr. E. W. Stephens, architect, showing that the proposed bath is to be 110 yards in length, and 33 yards wide. It will be erected near the Artichoke Inn, in the Ashford-road. A supply of pure water, after filtration by a bed of charcoal, can be obtained from the river Len.

Guildford.—The Urban Sanitary Authority of Guildford, having decided not to adopt the Baths and Washhouses Act, application was made to the Earl of Onslow for a site on land belonging to his lordship, near the river. His lordship gave his approval to a portion of the field at the rear of the gas-works, and abutting on the river being used for the purpose, subject to the consent of the lessee, who expressed his willingness to let half an acre for the projected bath. Mr. Henry Moon, of Guildford and Godalming, surveyor, one of the committee, prepared a preliminary plan for a bath on this site, and the committee were satisfied that a bath of large size, and in all respects suitable, could be constructed at a cost of between 600*l.* and 900*l.* A company has been formed for the erection of the baths.

VARNISHED PAPER ON WALLS.

SIR,—Will one of your numerous readers inform me the best way to strip varnished paper from walls? I have tried hot lime, soda, pearl-ash, and Portland cement, but with all it is a tedious job. A COUNTRY PAINTER.

Somerset Archæological Society.—This society will visit Bath on July 25th. Mr. Parker, Dr. Freeman, and others are expected to be present. The local secretary, the Rev. W. Hunt, is appointed to make arrangements for the excursionists.

ARCHITECTURE AT THE ROYAL ACADEMY.

SIR,—At four o'clock one afternoon, when all the rest of the Academy was crammed by a fashionable and eager crowd, there was not *one* single person, save myself, anywhere near the display of architectural drawings in Gallery IX. A little throng were bent over the miniatures upon the opposite side, but otherwise the gallery was entirely empty. This afforded so curious a contrast to the animated scene in every other corner of the building that I am tempted to record it. The why and the wherefore of this neglect would appear to be a problem which might be advantageously solved. A large percentage of those who visit the Academy may be reasonably supposed to love or admire art; then, loving that, why do they eschew architecture in so marked a manner? H. H.

FEES TO FOREMEN.

ALTHOUGH a great reform has taken place of late years in the building trades, and the relations existing between employers and employed have been established on a firmer basis, there are still occasions when the privileges of each are tampered with and abused. By means of many trade societies and combinations established throughout the country, these abuses are brought to light, thoroughly investigated, and finally abolished. So perfectly is this done, that the chances of any evil arising to the detriment of employers or employed would seem impossible. Evils do arise, however, which escape exposure for a time, and too much light cannot be thrown on them for their abolition when discovered.

For some years past a system has been gradually springing up in many large firms where the carrying out of labour is chiefly entrusted to a number of overlookers or foremen, by which black mail is levied on certain of those who are under them, in return for which they promise them constant employment, and the overlooking of any faults in their work caused by either carelessness or inability.

Although emigration has greatly diminished the amount of skilled labour which was, as it were, lying idle in this country, there is still a great surplus left, and although vast building operations, and so forth, to the improvement of the country, are continually being carried on, the demand is still unequal to the supply. In small firms, where the employer is constantly looking after his men, and knows each individual one by sight, such an evil as buying employment is impossible, as he himself regulates his men according to their ability and worth to the work he has in hand. In large firms, where several hundreds of men are employed, this is impossible, and every opportunity is thus thrown in the way of those who are appointed to act as overlookers for their employers, to study their own interests and desires. The rule is for a man wishing to procure a job in many of these latter firms to get an introduction to the foreman of his particular trade, and offer him a certain fee for his interest in procuring him employment, the sum varying in accordance with the benefit to be received. The offer is generally accepted, and if he happens to be a good workman, so much the better; he rapidly gains favour with the foreman, whom he takes care to propitiate by various little favours that he might require,—such as doing little jobs privately for him, in return for which he is kept on as a constant hand. In the majority of cases the hands thus employed know little or nothing about the work, and in consequence pay all the greater for their emolument.

A certain amount of labour is necessary, however, to satisfy the employer, and to make up for his outlay of capital; and for this reason numbers of hands are taken on at busy times (principally in the summer), who are worked to the full extent of their powers to make up for the unskilled and inefficient members, who lead a charmed life,—and of whom it is not cared to complain about,—afterwards to be discharged, perhaps at the commencement of a long winter, at a moment's notice, unless they have been initiated into the mystery. Many refuse the offer, if thrown open to them, trusting to their skill and good name in their trade to gain them fresh employment sooner than buy over those who merely hold a corporal position over them.

The evil of this system cannot be made too apparent, giving rise, as it does, to bad workmanship, favouritism, jealousy, and bad feeling amongst a class where nothing but goodwill and unanimity should exist. Sometimes, however, an exposure is made.

Some few months ago a large employer in the south-western part of the metropolis was informed by one of his *employés* that he was discharged for not making the foreman a small acknowledgment, as several of his fellow-workmen had done. Knowing the man to be a good workman, he caused inquiries to be made, which resulted in a gross system of bribery and imposition being detected on the part of several hitherto supposed trustworthy men. He immediately discharged them and got fresh hands in their place, who I trust profited by the lesson thus taught them.

This is only one instance meeting with a sharp remedy. Others are still going on. A great fault lies somewhere. Perhaps if the employers would look more into the doings of their men the evil might be alleviated; instead of being satisfied with a good return for capital invested—no matter by what means it has been got together.

A. B.

NEW BANKING PREMISES.

Birmingham.—The new premises of the Birmingham Joint Stock Banking Company in New-street are completed. The building is constructed throughout of Portland stone, is Early Italian Renaissance in design, three stories, or about 80 ft. high, with a frontage of 32 ft. The lower story, forming the front of the bank, is divided into three bays by polished red Aberdeen columns, 19 ft. long, supporting the central pediment over the entrance and cornice. These columns weigh between five and six tons each, and stand upon a Cornish gray base. Two figures, representing Manufacture and Agriculture, as symbolised by Birmingham and Warwickshire, stand out prominently on the pediment. The floors have been made by Messrs. Dennett & Co., on their fireproof principle. The whole of the ironwork is from the works of the Horseley Iron Company, Tipton. The total cost will be about 8,000*l.* The architect is Mr. F. B. Osborn; the builders are Messrs. Barker & Son, of Handsworth; and the carving has been done by Mr. John Roddis, of Aston-road.

Dorchester.—Messrs. Eliot & Co.'s new banking premises are to be erected by Mr. Gregory. The site of the building is in High West-street.

Fordingbridge.—The Wilts and Dorset Banking Company have erected at Fordingbridge a new building for the purposes of their business. The architects are Messrs. Kemp-Welch & Reynolds, of Salisbury and Bournemouth; and the contractors Messrs. Carly & Tuck, of Ringwood.

SOME NEW SKATING RINKS.

Margate.—The prospectus has been issued of the Margate Skating-rink, Concert-hall, Swimming Baths, and Aquarium Company (Limited), with a capital of 50,000*l.*, in 10,000 shares of 5*l.* each. The company had acquired, for a term of 99 years, from the Marquis of Conyngham, the foreshore extending from near the Pier Hotel to the Fort Point, and thence to the Second Point, a frontage exceeding 370 ft. to the sea, at a rent of 50*l.* a year. Upon this it is proposed to erect the buildings indicated. Mr. Bedborough is the architect to the company.

Ipswich.—A new skating-rink and drill-hall has been opened at Ipswich. It is described in a local journal as "a noticeable building, more because of its unusual shape than its architectural pretensions." With a view to economy, walls have been avoided, with the exception of one end, the arched roof springs immediately from the ground on either side, forming both walls and roof. The space thus covered in is about 160 ft. long by 60 ft. wide, and the area of smooth surface which will be available for rinking will be 150 ft. by 50 ft., the remaining space at the sides being enclosed by the pillars which support the principals of the roof, the intervals between the pillars forming recesses, where seats will be provided. The arched roof reaches a little over 25 ft. in height at the ridge. The entire work of erecting the hall, except the asphalte surface of the rink floor, has been done by Messrs. E. & E. C. Gibbons, builders, under the superintendence of Mr. Thomas Miller, C.E. The original contract was 800*l.*, but there have been "extras."

The Hastings Borough Surveyor.—The salary of Mr. Meadows, borough surveyor, has been increased, by a unanimous vote of the town council, 100*l.* per annum.

CHURCH-BUILDING NEWS.

Whitstable.—The parish church, which, for the past eleven months has been undergoing restoration, was reopened on Easter Sunday. The works carried out comprise the rebuilding of the chancel, at the expense of the lay impropriator, Mrs. T. S. Clarke; the reconstruction of the south wall of the nave and the roof, the rebuilding of the wall of the north aisle from the porch eastwards, and the erection of a spacious vestry at the north-east end of the church, in lieu of the small lean-to structure which formerly disfigured the angle formed by the tower and the south wall. The walls (formerly of rubble) are built of Kentish rag stone, with Bath stone dressings.

Upchurch.—On the 20th ult. the parish church of Upchurch, in the Sittingbourne Deanery, was re-opened, after thorough restoration under the direction of Mr. Blomfield. Every ancient feature has, we are told, been carefully preserved. The "three-decker" pulpit and square pews, which blocked up the chancel, and other obstructions in the tower and side chapels, have been removed, and for the first time for many years the proportions of this church (which dates from 1,300) have been fully displayed. The late vicar had previously restored the south aisle, and the font and organ were erected in his time. The present vicar, the Rev. Beauchamp St John Tyrwhitt, has raised the funds for the present work, and All Souls' College have restored the chancel. The distinctive feature is the elevated altar dais, now paved in mosaic, and its ancient bread steps with three sedilia. The chancel, two steps below this, but above the nave, has been paved with tiles, relieved by medallions of more ornamental tiles. The chief ornament is a long cross, surrounded by blue and white tiles, which marks the family vault of the Packmans. This decoration of her father's tomb was done at the expense of Mrs. Dodd, of Rainham. Another cross in blue marks the vault of the late vicar's, Mr. Woodruff's, children. The stalls are of oak, with carved poppy-heads; and they and the prayer-desks have pierced tracery of Japanese wood. The reseating has been done in pitch pine, and the pavement made good throughout. Messrs. Dove, Brothers, of Islington, were the contractors.

St. Mary's, Newington (Surrey).—The new parish church was consecrated on May 1st, by the Bishop of London. Mr. James Fowler, Louth, Lincolnshire, is the architect, and Messrs. W. Downs & Co., Southwark, are the contractors. We have already illustrated it.

Nuneaton.—The foundation-stone of the new nave of Nuneaton Abbey was laid on the 26th ult. by Lord Leigh, with Masonic honours. The foundations and some ruins of the piers of the central tower are all that is now remaining of this fine old abbey. It is proposed by the building committee to commence the restoration by rebuilding in the first place a portion of the nave on the old foundation. Mr. Rolfe, architect, Reading, has been called in to design and superintend the works. The building committee propose to carry out the work bit by bit as funds are forthcoming, in the best and most substantial manner, but unless a very considerable sum is raised there is said to be little hope of completing the work in this generation.

Berriew.—The parish church of Berriew was reopened on the 26th ult., after restoration. The old church, now completely recast, was erected in 1803. As altered, the church now consists of a nave, with north and south aisles. The old walls have been retained as far as possible, but altered where necessary to suit the new high-pitched open-timbered roof of the nave, and the lean-to aisle roofs, and strengthened with buttresses. A chancel has been built, with vestry and organ-chamber on the north side, the latter has arches opening into the chancel and north nave aisle. The tower has been raised and provided with new windows, and has now a wooden spire or capping covered with Staffordshire tiles. Welshpool stone has been used for the new walling, and Shelvoke and Bath for the dressings. New spouting and downpipes and drainage are provided throughout. The windows have been glazed with thick cathedral tinted glass, in quarries and patterns, by Mr. W. Done, who also executed the new glass required for the east window. The architect was Mr. Haycock, of Shrewsbury, and the work has been carried out by Messrs. Fisher & Dyson, of Huddersfield. The total cost is about 3,500*l.* Mr. G. Landucci executed the carving. The accommodation provided in the church is for rather over 400 persons.

Horton.—The restoration of the old Norman church of this parish has been commenced, and has been entrusted to Messrs. Fassnidge & Son, contractors, Uxbridge. Upon the removal of the unsightly pews, it was discovered that the massive chalk pillars had been to a great extent undermined by intra-mural interments, now no longer permitted. The nave roof was also found to be in a dilapidated condition.

Brighton.—The designs of Mr. Blomfield have been under consideration, with regard to the alteration of the Chapel Royal, Brighton, and it is proposed they shall be carried out. The estimated cost is about 2,000*l.*; and the improvements will include re-seating, and the removal of the gallery over the communion-table.

Winstone.—Winstone parish church, Gloucester, has been re-opened, after restoration under the direction of Messrs. Waller & Sons, architects, Gloucester. The chancel being in a very dilapidated condition, was almost entirely rebuilt, the whole of the old work possessing any interest being reinstated in its old positions. A new west doorway has been put to the tower, and the door has been put in good order. One peculiarity of the church is that there is no east window in it, and never has been one. The work of restoration has cost between 800*l.* and 900*l.* The contractors were Mr. Cambridge and Mr. Chamberlain, who divided the masonry and carpentering work between them.

DISSENTING CHURCH-BUILDING NEWS.

Northampton. — The Wesleyan chapel in Grafton-street, Northampton, has for some time past been found insufficient for the requirements of the connexion, and it has been decided to pull down the present edifice, as also several cottages between it and Grafton-square, and to build a new chapel on the site thus secured. It will face Regent-square, and will be in a plain Italian style. The front will be of pressed brick, with Bath stone dressings. There will be a basement story, which will provide accommodation for an infants' school-room, and five vestries, together with heating apparatus for warming the building with hot air. On the ground floor accommodation will be for 419 adults. On the gallery floor there will be accommodation for 306 adults and 87 children, making a total of 812. Mr. S. J. Newman is the architect, and Mr. James Watkin the builder, the amount of the contract being 2,308*l.*

Wood Green.—The foundation-stone has been laid of a new Baptist Chapel in the Finsbury-road, Wood Green, by Mr. John Edwards. The architect is Mr. Banister Fletcher.

Ipswich.—The new Baptist Chapel, in the London-road, Ipswich, has been opened. It stands about 20 ft. back from the road, and will accommodate about 1,000 persons. The area is benched with benches of pitch-pine, varnished. Warmth is provided for by hot-water pipes. There is no baptistery provided in the chapel; there being one in the old chapel, which is available for use still. The entire outlay is about 5,300*l.* The architect was Mr. Brightwen Binyon. Messrs. E. & E. C. Gibbons were the builders; Messrs. Stearn & Son did the gasfitting, varnishing, &c.; and the hot-water apparatus was supplied by Messrs. Thomas & Coleman, Cornhill, Ipswich.

SCHOOL BOARD SCHOOLS.

Combs (Suffolk).—New school buildings, comprising mixed and infant schools, with master's residence, have just been opened. The walls are faced with white bricks, with red bands and arches. The roofs are slated, and inside are open to the collar, with plastered ceilings and wrought principals and purlins. The contract, amounting to about 1,700*l.*, has been carried out by Messrs. Andrews & Crowe, of Stowmarket, under the superintendence of Mr. Henry Lovegrove, architect.

Brighton.—The new schools erected by the Brighton School Board, in Pelham-street, are now ready for opening. The extreme length of the ground occupied is 186 ft., and the greatest width 93 ft., which includes the play-grounds. Facing Pelham-street the frontage of the building is 120 ft. The style is Domestic Gothic, the plans being drawn up by Mr. Simpson, the architect to the Board. Brick is chiefly used; but by the free introduction of Doulting stone for the coping, sills, gables, &c., a pleasing finish is given to the whole. In the brickwork, too, relief is afforded by herring-bone patterns in colour, and by bands and lacing courses of red kiln brick. Red kiln and white Suffolk bricks are also used for the arches of the openings, the spandrels being filled in with designs in colour. Other striking features outwardly are a central tower and spire, the open woodwork of which is of oak, surmounted by a gilt vane; and the carved stone pinnacles to the gables. The entrance to the boys' school, which is built to accommodate 300 pupils, is at the north front from Cheapside. Here a flight of stone steps leads up to a school-room, 60 ft. long, 23 ft. wide, and 22 ft. high, which runs east and west, with four large windows looking south, and two west. Besides the schoolroom proper, there are three class-rooms, with an out-look to the north, east, and south respectively, each about 20 ft. square. The approach to the girls' school, which is at the south end, corresponds to that of the boys'. The schoolroom, facing west, and with three large windows on the same side, is about 42 ft. long by 22 ft. wide, accommodation for 200 scholars only having to be provided. The space devoted to the infants, for whom provision is made to the number of 250, is on the ground-floor. The schoolroom is like the letter L in shape, being about 16 ft. high, some 40 ft. by 20 ft. at its longest side, and 26 ft. square, more or less, at its shortest. Two class-rooms front south-east and south-west respectively. A babies' room, 20 ft. square, is also provided. The work has been carried out by Mr. John Bruton, builder, Hampton-street, under the superintendence of Mr. G. Wickham, acting on his behalf, and with Mr. Thomas Ransom as clerk of the works.

Fort William and Banavie, N.B.—The two new Board Schools of Fort William and Banavie were lately opened by Mr. Lochiel, M.P. The architect of both was Mr. Ross, of Inverness. The Fort-William school, which affords accommodation for upwards of 200 children, cost, with schoolmaster's house, play-sheds, &c., 3,000*l.*; and the Banavie school and master's house, 1,400*l.*

STAINED GLASS.

Ramsgate.—A stained-glass window has just been placed in St. George's Church, Ramsgate, to the memory of the late Miss Hardy. The window, which is by Messrs. Lavers, Barraud, & Westlake, is in the north aisle, the third from the west, and consists of two cinquefoil-headed lights. The most westerly represents the women coming to the sepulchre on the morning of the Resurrection. The lower part of the window is filled in with small designs, the principal of which is a shield with the letters "I.H.S." in antique form. The most easterly of the lights represents the appearance of our Blessed Lord to the women on their return from the sepulchre. The lower part of this light is filled in like the other, but the shield contains the Greek letters "X. P. C."

Hoarcross.—Several of the windows of the new Church of the Holy Angels, Hoarcross, have been filled with stained glass. The east window of the chantry chapel is of three lights, and it has the Crucifixion in the centre light, with St. Mary and St. John on either side, and below is the subject of the Resurrection of Our Lord. The side windows are filled with figures of warrior saints. The stained glass throughout the church has been executed by Messrs. Burlison & Grylls, of London.

Buckingham.—A window in memory of the Rev. A. N. West has just been placed in the parish church, Buckingham. The subjects are,—St. Philip baptising the Ethiopian Eunuch, with the inscription, "What doth hinder me?" in one light; and in the other, St. Paul's vision of the man of Macedonia, with the inscription, "Come over and help us." The window, which is the third in the north aisle, is by Messrs. Clayton & Bell.

COMPETITIONS.

Lakenheath School Board.—Thirteen sets of plans for new schools in the village of Lakenheath, comprising a mixed school, infants' school, class-rooms, and master's residence, were submitted in competition, and at the last meeting of the Board those submitted by Mr. H. Lovegrove, of Budge-row, Cannon-street, were unanimously selected. The estimated cost is 1,750*l.*, exclusive of fencing the site one acre in extent.

SASH FASTENERS AND SASH LINE.

HOPKINSON'S patent guarded lever sash-fastener, mentioned by us with approval some time ago, has been improved by the addition of a "holdfast plate," to prevent thieves forcing it off the window with a jemmy. The fastener has been invented for more than three years, and is getting into general use.

Hookham's steel ribbon sash-line is another successful invention. It is made in lengths of 100 ft., and, according to the strength required, is formed of two or more such lengths of thin watch-spring steel about ½ in. wide, and has an outside binding of copper wire for the entire length. The mode of forming a knot for the line is very simple, and easily done, but it is absolutely necessary it should be done properly.

LEAD STEALING.

SIR,—We are erecting some new houses in Mandeville-place, Manchester-square, and for a long time have been missing lead to such an extent that the assistance of the police was called in, and the following is the result.

It will be seen from the evidence of Detective Murphy, D division, that he saw the two plumbers, E. Stacey and E. Pearce, leave the job, evidently carrying a great weight. He followed them to 73, Cleveland-street, which is a plumber's, kept by a Robert Aldridge, into whose shop they went. The officer followed them in, and asked them what they wanted; when Stacey, who had the most courage, said they came there to borrow some metal. The officer then told them he should take them into custody for stealing this lead, which was on the scale quite warm, when Stacey tried to escape by the parlour door, but was brought back and threatened by the officer that he would use his truncheon, which had the desired effect of quieting Stacey. While looking for a constable to assist him, the man Pearce took off a very broad belt, and threw it into the fireplace, which the officer picked up. He then asked Stacey if he had a belt on. He replied, "No." They were taken to the station, and, when searched, Stacey was found to be wearing a belt made expressly for the purpose of carrying lead. The foreman, Mr. John M'Coghlan, suspected them; and that day the man Stacey came to his office for a roll of pipe, from which they had taken 46 lb. Stacey had a piece weighing 25 lb., while Pearce had 21 lb., with nails driven into it to assist in carrying it, all new pipe, cut into lengths, so as to be bent without being separated.

The prisoners pleaded guilty to stealing it, and were each sentenced to three months' hard labour last Saturday, May 13th.

BRAID & Co.

Books Received.

The Churchwarden's Guide. Edited by W. G. BROOKE, M.A., Barrister-at-Law. London: Knight & Co.

EIGHT editions of this book having been sold, we need say little more than that the ninth, now before us, has been revised and improved by Mr. W. G. Brooke. There are so many rocks ahead nowadays on which a churchwarden may strike, that those who, for the first time, accept the office will find the price of this "Guide" a good investment.

Miscellanea.

German Labour in Scotland.—We are told that a number of master builders in Greenock are making inquiries as to whether they can obtain the services of German masons to supply the places vacant in consequence of the present strike in the building trade, and that a reply has been received that hundreds of German masons can be sent over to Greenock, on very short notice, at wages averaging about 7d. per hour, the rate demanded by the masons who have struck work being 10d. per hour. The employers intend coming to a decision on the subject this week, and in the meantime they are endeavouring to provide lodging accommodation for 300 Germans, should it be considered necessary to engage them. Sad work!

Second St. James's Co-operative Benefit Building Society.—This society, which was formed a month since at the Craven Chapel Lecture-hall, Marshall-street, Golden-square, on the principle of alternate ballot and sale, advancing 400*l.* for ten years by the payment of 1s. 6d. per week, has met with such marked success that the directors are enabled to announce two appropriations, one by ballot, and one by sale, to take place on Thursday next, May 25th. The public are invited to hear the principles explained. We are told shares to the value of 200,000*l.* have been taken up.

Large Sheer Legs.—Sir William Armstrong & Co. have just erected the largest sheer legs in the world at the Elswick Works. They will be wrought with hydraulic machinery, and able to make a dead lift of 100 tons.

The Late Mr. John Forster's Mansion at Kensington.—By direction of the late Mr. John Forster's executors, his freehold mansion at Kensington, known as Palace-gate House, was offered for sale, by auction, at the Mart, Token-house yard, by Mr. James Beal. After stating that Mr. Forster had given 4,000*l.* for the site, the auctioneer invited biddings, when 10,000*l.* were offered, followed by an advance to 12,000*l.*, and the property was rapidly run up to 17,200*l.*, when the biddings slackened. There being no further advance the property was withdrawn. It was subsequently stated in the room that the sum which the vendors require for the property is from 18,500*l.* to 19,000*l.* The house was built by Messrs. Cubitt & Co.

The late Mr. David Bryce, R.S.A.—Scottish art, and especially Scottish architectural art, has sustained a severe loss in the death of Mr. David Bryce, R.S.A., which event occurred on the 7th instant, at his residence, George-street, Edinburgh. Although Mr. Bryce had been in failing health for some time past, he was able to attend to business for two or three hours each day, and up till the 2nd instant he regularly took walking or carriage exercise. On the 3rd instant, however, he was seized with cold, which developed into bronchitis, and under this malady he succumbed.

Bricklayers.—A meeting is to be held at the Artisans' Institute, 29, Castle-street, Upper St. Martin's-lane, on Monday, the 22nd of May, 1876, at 7.30 for 8 p.m., "To consider what Bricklayers are, and what they may be." A correspondent says this is a step towards the initiation of a movement, taking its rise from the discussion in the columns of the *Builder*, upon the subject of education of bricklayers. It is hoped that clerks of works and leading foremen, being bricklayers by trade, will attend.

The Fine Arts at Florence.—The College of Professors in the Academy of the Fine Arts of Florence, which may be esteemed the Athens of Italy, have just nominated to the distinction of honorary academicians, J. E. Boëhm, Frederick Leighton, and Elizabeth Thompson (of London), and the distinguished painter, Bernardo Amiconi, resident in London. This last-named artist has now in the Royal Hibernian Academy, Dublin, a picture, "How Sweet!" which was in the exhibition of the Royal Academy.

Society for the Encouragement of the Fine Arts.—This society held its third *conversazione* of the present session on the 11th inst., in the picture-galleries, South Kensington Museum (by permission of the Lords of the Council on Education). A large company assembled shortly after eight o'clock, and were received by Mr. James Edmeston, the chairman of the Council.

Fatal Accident at a Church.—A new church is being built at Ford, Devonport. On Monday in last week the contractor, Mr. Lang, of Moricetown, was standing with some of his men at the top of one of the arches, when it gave way, and five of them fell to the ground. Three of the men were much injured, and Mr. Lang was taken up insensible, and died soon after.

Retrospective Exhibition of the Industrial Arts, Brussels.—This exhibition, now in course of formation, will be opened on the 1st of August next. Its object is to diffuse good models, and it will include reproductions by various processes of objects of ancient industrial art. The Secretary is M. Mignot-Delstanche, Brussels.

Miss Thompson's "Balaclava."—This, the most recent work of Miss Elizabeth Thompson, is at the same time her finest production, and will tend materially to consolidate that fame which she justly acquired by "The Roll Call." It is now on view at 148, New Bond-street, and well deserves a visit.

Victoria Hospital, Gough House, Chelsea. The Victoria Hospital for Sick Children will be reopened, after extensive alterations and repairs, on the 20th of May, on which occasion the Princess Louise of Lorne has consented to be present.

TENDERS

For the erection of a Home at Parsons-green, Fulham, for the London Female Preventive and Reformatory Institution. Mr. W. P. Griffith, architect. Quantities not supplied:—

Smith	£2,589 0 0
Hockly	2,180 0 0
Nixon	2,150 0 0
Lidstone	2,070 0 0
Pocock	1,975 0 0
Carter	1,750 0 0

For new bay window and decorations to 5, Fellows-road, Haverstock-hill, for Mr. Edmund Lloyd. Mr. W. P. Griffith, architect:—

Hockley	£225 0 0
Lawrence	179 0 0
Lidstone	196 0 0

For police station, stabling, &c., at Patcham, near Brighton. Mr. H. Card, architect. Quantities by Mr. E. H. Nunn:—

Turner	£2,920 0 0
Newnham	2,758 0 0
Nash & Co.	2,588 0 0
Bruton	2,550 0 0
Barnes	2,415 0 0
Howard	2,400 0 0
Wells	2,315 0 0
Steer	2,150 0 0
Deacon	2,145 0 0
Anscombe (accepted)	2,043 0 0

For SS. Mary and Michael Schools, Commercial-road, E. Messrs. John Young & Son, architects. Quantities by Messrs. Arding, Bond, & Buzzard:—

	Infant School.	Middle School.
Robbins	£1,200 0 0	£1,970 0 0
Little	915 0 0	1,599 0 0
Bayes, Brothers	900 0 0	1,580 0 0
Lawrence	865 0 0	1,575 0 0
Ennor	970 0 0	1,550 0 0

For two houses in the Granville-road, Leicester. Mr. A. Hardy, architect. Quantities by Mr. Geo. Jackson:—

Bland & Son	£3,572 5 0
Billington	3,314 0 0
Bass & Hodgkins	3,245 2 0
Kellett	3,095 0 0
Gilbert & Pipes	3,009 0 0
Stork (accepted)	2,903 15 0

For additions to Taunton Trade School, Southampton. Mr. R. Crichton, architect:—

Dyer	£1,056 0 0
Crook	976 0 0
Bostock	947 0 0

For new large room at Sudbury, Middlesex:—

Larke	£2,376 0 0
Macey	2,094 0 0
Greenwood	2,078 0 0
Bangs & Co.	1,995 0 0
Ennor	1,890 0 0
Lascelles	1,798 0 0

For three houses at Peckham Rye, for Mr. J. Wolsey. Mr. W. A. Murphy, architect:—

Brightmore	£994 0 0
Judd & Hawkings	919 0 0
Parker & Evans	740 0 0
Richardson	735 0 0
Colebrook	659 0 0

For completion of eleven houses, Oaklands-grove, Shepherd's-bush, for Mr. Henry Cowlard. Mr. John Wallis Chapman, architect:—

Judd & Hawkings	£4,927 0 0
List	3,819 10 0
Moy & Giles	3,7 8 0 0
Ellis	3,300 0 0
Dexter	2,979 0 0

For Board offices for Ealing Local Board. Mr. Charle Jones, architect:—

Bray	£5,7 0 0 0
Judd & Hawkings	4,914 0 0
Niblett & Son	4,820 0 0
Waters	4,410 0 0
Nye	4,360 0 0
Adamson	4,328 0 0

For the erection of three warehouses in Dorset-street, E.C., for Messrs. Ward, Lock, & Tyler. Messrs. Spalding & Knight, architects. Quantities by Mr. G. Fleetwood:—

Kelly	£12,780 0 0
Grimwood	11,998 0 0
Gammon	11,666 0 0
Foster	11,100 0 0
L. H. & R. Roberts	11,080 0 0
Dove, Brothers	10,395 0 0
Grover	10,145 0 0
Downs	10,103 0 0
Shepherd	9,851 0 0
Morter	9,843 0 0
Nightingale (accepted)	9,589 0 0

For blocks of buildings adjoining Battersea Park, for the Metropolitan Artisans and Labourers Dwellings Association. Mr. Charles Barry, architect. Quantities by Messrs. Strudwick, Selby, & Rogers:—

	Block A.	Laundry A.	Block B.	Laundry B.
Allen	£23,730	£1,300	£14,830	£1,240
Trollope & Sons	22,720	1,285	13,770	1,190
Brass	21,797	1,292	13,937	1,179
Holland & Hannen	22,080	1,240	13,050	1,142
Perry & Co.	21,324	1,249	12,852	1,138
Baker & Sons	21,230	1,230	12,960	1,115
Peto, Brothers	21,000	1,244	12,879	1,169
Patrick	20,973	1,180	12,790	1,047
Macey	20,766	1,151	12,559	1,058
Browne & Robinson	20,426	1,170	12,564	1,073
Downs & Co.	19,160	1,100	12,900	1,040

For the erection of Pumps, &c., at Guildford Water Works:—

Powis & Co.	£731 0 0
Buchan	658 11 8
Botterill & Co.	608 0 0
Tilley	607 10 0
Mason	592 0 0
Filmer & Mason (accepted)	470 0 0
Gimson & Co.	453 4 0

For pulling down and rebuilding the Pewter Platter, Leather-lane. Mr. Dixon, architect. Quantities by Mr. Kirkby:—

Pritchard	£2,515 0 0
Godden	2,425 0 0
Hockly	2,400 0 0
Way	2,150 0 0

For garden wall and repairs at Mill-hill, Barnes, for Mr. W. Taylor:—
Tale (accepted) £113 5 8

For the erection of new schools for the London School Board. Mr. E. R. Robson, architect:—
Leipsic-road, Camberwell. Quantities by Mr. W. H. Barber:—

Perry & Co.	£8,935	0	0
Downs & Co.	8,709	0	0
Tyerman	8,505	0	0
Thompson	8,428	0	0
Hook & Oldrey	8,409	0	0
Brass	8,383	0	0
Pritchard	8,138	0	0
Merritt & Ashby	8,103	0	0
Jerraid	7,993	0	0
Nightingale	7,871	0	0

Coal-yard, Drury-lane. Quantities by Mr. John Nicholls:—

Downs & Co.	£7,897	0	0
Perry & Co.	7,278	0	0
Roberts	7,277	0	0
Brass	7,229	0	0
Hook & Oldrey	7,134	0	0
Grover	7,129	0	0
Williams & Son	7,094	0	0
Boyce	6,984	0	0
Nightingale	6,983	0	0
Kirk & Randall	6,914	0	0
Pritchard	6,755	0	0

Langdon-road, Highgate. Quantities by Messrs. Northcroft, Son, & Neighbour:—

Boyce	£6,753	0	0
Roberts	6,451	0	0
Williams & Son	6,416	0	0
Downs	6,376	0	0
Lawrence	6,364	0	0
Hobson	6,325	0	0
Pritchard	6,226	0	0
Hook & Oldrey	6,222	0	0
Nightingale	6,185	0	0
Wall, Brothers	6,099	0	0
Grover	6,094	0	0

Hollydale-road, Nunhead. Quantities by Mr. W H. Barber:—

Crockett	£9,321	10	0
Perry & Co.	9,280	0	0
Tyerman	9,150	0	0
Downs	9,110	0	0
Pritchard	8,873	0	0
Hook & Oldrey	8,730	0	0
Ennor	8,624	0	0
Brass	8,583	0	0
Nightingale	8,484	0	0
Kirk & Randall	8,431	0	0

Webber-row, Westminster Bridge-road. Quantities by Messrs. Northcroft, Son, & Neighbour:—

Crocket	£5,711	0	0
Kirk & Randall	5,710	0	0
Downs	5,589	0	0
Brass	5,445	0	0
Tyerman	5,400	0	0
Pritchard	5,328	0	0
Nightingale	5,242	0	0
Hook & Oldrey	5,200	0	0
Jarraid	5,182	0	0

Addington-street, Westminster Bridge-road. Quantities by Messrs. Gardiner, Son, & Theobald:—

Downs	£8,575	0	0
Perry & Co.	7,883	0	0
Hook & Oldrey	7,790	0	0
Crocket	7,652	0	0
Lonergan	7,638	0	0
Brass	7,633	0	0
Kirk & Randall	7,466	0	0
Nightingale	7,373	0	0
Pritchard	7,289	0	0

For new Wesleyan school, Wandsworth-road. Mr. Jas. Weir, architect. Quantities by Mr. C. G. Maylard:—

Nightingale	£1,970	0	0
Gammon & Sons	1,970	0	0
Lathey Brothers	1,950	0	0
Dove Brothers	1,915	0	0
Spinks	1,885	0	0
Adamson & Sons	1,835	0	0
Gregory	1,777	0	0
Turtle & Appleton	1,570	0	0

For enlarging All Saints Church at Hockesill, Bishops Stortford, Herts. Mr. G. E. Pritchett, architect:—

Gibbons	£6,790	0	0
Glasscock	6,775	0	0
Brown	6,584	0	0
Tooley	6,450	0	0

For completing certain works at Thirfield Church, Royston, Herts. Mr. G. E. Pritchett, architect:—

Bullen	£2,430	0	0
Gibbons	2,150	0	0
Brown	1,984	0	0
Carter	1,970	0	0
Savell	1,950	0	0

For rebuilding the Ship and Blue Ball, Boundary-street, Shoreditch, for Mr. Lake. Messrs. Francis, architects:—

Banks	£1,348	0	0
Sheffield	1,247	0	0
Shurmer	1,197	0	0
Hearle	1,183	0	0
Marr (accepted)	1,174	0	0

For alterations to the Cock, Mare-street, Hackney, including pewtering and gasfitting, for Mr. Thomas Hare. Mr. C. Chapman, architect:—
Marr (accepted) £530 0 0

For new bar fittings, including pewtering and gasfitting, at the Crooked Billet, Cable-street, Shadwell, for Mr. G. Absell:—
Marr (accepted) £700 0 0

For forming a skating rink, with necessary offices, &c., for the Enfield Skating Rink Company, Limited, Enfield. Messrs. Ebbetts & Cobb, architects:—

	No. 1.	No. 2.
Patman	£633 0 0	£708 0 0
Steel, Brothers	536 18 0	588 18 0

For rebuilding No. 1, Green-lane, High-street, Battersea, for Mr. James J. Morgan (Contract No. 3). Messrs. Ebbetts & Cobb, architects:—

Eborall	£570	0	0
Steel, Brothers	510	0	0

For alterations to the Marlborough Head, Pelham-street, Brick-lane, for Messrs. Truman, Hanbury, & Buxton, Mr. W. E. Williams, architect:—

Palmer	£460	0	0
Hunt	447	0	0
Marr (accepted)	419	0	0

For rebuilding No. 42, Cornhill. Mr. Benjamin Tabberer, architect. Quantities by Messrs. Franklin & Andrews:—

Palmer & Son	£5,913	0	0
Downs	5,287	0	0
Larke	5,192	0	0
Merritt & Ashby	5,005	0	0
Staines & Son	4,943	0	0
Crabb	4,910	0	0
Brass	4,895	0	0
Braid & Co.	4,890	0	0
Robinson	4,887	0	0
Cohen	4,842	0	0
Lawrence	4,815	0	0
Mark (accepted)	4,790	0	0

For shop and premises, Dulwich-road, for Mr. Sholl. Messrs. Hammack & Lambert, architects:—

Haydon	£2,400	0	0
Johnson	2,195	0	0
Peacock	2,167	0	0
Macey (accepted)	2,155	0	0

For tavern, Kellett-road, Brixton. Messrs. Hammack & Lambert, architects:—
Macey (accepted) £2,270 0 0

For repairing a portion of the Brooke-road, Upper Clapton:—

Dunmore	£375	0	0!
Richardson	240	0	0
Keeble	225	0	0
Killingback	224	0	0
Bloomfield	215	0	0
Jackson (accepted)	155	0	0!

TO CORRESPONDENTS.

Erratum.—Mr. Paull writes to say he is joint architect with the gentleman named of the schools in Westminster-road, mentioned in our notice of architectural works in the Academy Exhibition. We but followed the catalogue.

H. L. (the power to recover from B. would depend upon the exact terms of agreement with him. Take advice).—"Lord John" (the contents of the block in question are but ⅝ parts of a cubic inch).—H. M.—R. M.—J. A.—J. B. & Son.—C. S.—M. L.—E. W.—J. W.—C. & W.—Mr. P.—G. T. C.—C. V.—C. P.—J. F. W.—C. G. M.—K. M.—A. G. H.—S.—P. N.—E. S.—B. & Co.—L. & Co.—C. B.—A. P.—S.—B. C.—F. B.—J. T.—B. T.—H. & O.—W. C.—H. J. J.—A. B.—R. & M. (next week).—A. A. L. (next week).—J. T. & Son (we cannot make any such pledge).—M. T. (too late for consideration this week).—C. C. H. (ditto).

We are compelled to decline pointing out books and giving addresses.

All statements of facts, lists of tenders, &c. must be accompanied by the name and address of the sender, not necessarily for publication.

NOTE.—The responsibility of signed articles, and papers read at public meetings, rests, of course, with the authors.

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Corsham, Wilts.

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Soundness, *It can be relied on not to open venty.*

Shapeliness. *The rock being naturally sound it is not necessary to cut it into a variety of shapes inorder to remove vents. The blocks are therefore square and shapely, and can be converted with the smallest waste.*

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